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TRANSACTIONS

OF THE

MEDICAL ASSOCIATION

OF THE

STATE OF ALABAMA.

(THE STATE BOARD OF HEALTH,)

ORGANIZED 1847—MEETING OF 1900.

MONTGOMERY, APRIL 17-20.

MONTGOMERY, ALA.
BROWN PRINTING CO., PRINTERS & BINDERS,
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PREFACE.

To the Members of the Medical Association of the State of Alabama:

This Volume is submitted to you with the hope that it will be found a fairly complete record of the Transactions of your last meeting.

The prompter appearance of the volume than that of last year is source of gratification.

This is due to the absence of some of the serious hindrances that then delayed the Committee, and also to the prompt and cordial co-operation of our printers.

G. P. WALLER, M. D., Montgomery,
J. C. LEGRAND, M. D., Birmingham,
W. H. SANDERS, M. D., Montgomery.
Publishing Committee.

The Medical Association of the State of Alabama.

PROGRAMME OF THE ANNUAL MEETING,

April 17-20, 1900,

AT COUNTY COURT HOUSE, MONTGOMERY, ALA.

COMMITTEE OF ARRANGEMENTS.

GLENN ANDREWS, M. D., Chairman.

S. A. BILLING, M. D., R. S. HILL, M. D.,
J. L. GASTON, M. D., W. M. WILKERSON, M. D.

SHIRLEY BRAGG, M. D.

FIRST DAY—TUESDAY, APRIL 17.

MORNING SESSION.

1. Call to order at 12 M. by the President—J. C. LEGRAND, M. D., of Birmingham.
2. Prayer—Rev. NEAL L. ANDERSON.
3. Address of Welcome—Dr. J. L. GASTON, M. D., President Montgomery County Medical Society.
4. Address of Welcome—Hon. E. B. JOSEPH, Mayor of Montgomery.
5. Annual Message of the President—J. C. LEGRAND, M. D.
6. Report of Senior Vice-President—SAMUEL H. LOWRY, of Huntsville.
7. Report of Junior Vice-President—SAMUEL G. GAY, M. D., Selma.
8. Report of the Secretary—G. P. WALLER, M. D., Montgomery.
9. Report of the Treasurer—H. G. PERRY, M. D., Greensboro.
10. Report of the Publishing Committee.
11. Reports of Special Committees.
12. Miscellaneous Business.

Adjournment.

EVENING SESSION.

1. Call to order at 8 P. M.
2. Historian's Address—M. B. CAMERON, M. D., Sumterville.

REGULAR REPORTS.

3. Acute Anterior Poliomyelitis—EUGENE DUBOSE BONDURANT, M., D., Mobile.
4. Broncho-Pneumonia in Adults—WILLIAM MUDD JORDAN, M. D., Birmingham.
5. Some Recent Studies in the Diagnosis and Treatment of Fevers, with Special Reference to the So-Called Typho-Malarial Type—WILLIAM GEOCE HARRISON, M. D., Talladega.
6. Surgery of the Brain—JOHN DANIEL SINKLER DAVIS, M. D., Birmingham.
7. Prevention of Tuberculosis—WILLIAM C. MAPLES, M. D., Scottsboro.
8. Gunshot, Gin-cut, and Granulating Wounds—WILLIAM D. GAINES, M. D., LaFayette.

Adjournment.

SECOND DAY—WEDNESDAY, APRIL 18.

MORNING SESSION.

1. Call to order at 9 A. M.
2. Unfinished Business.

CONTINUATION OF REGULAR REPORTS.

3. Uric Acid—CHARLES WALTER WILKERSON, M. D., Montgomery.
4. Cerebro-Spinal Meningitis—CUNNINGHAM WILSON, M. D., Birmingham.

11:00 O'CLOCK A. M.—SPECIAL ORDER.

5. Jerome Cochran Lecture—WILLIAM OSLER, M. D., L. L. D., Baltimore, Md.
6. Simple Inflammation of the Eye as Observed by a Busy Practitioner—OSCAR DOWLING, M. D., Mobile.
7. Fistula in Anno—DYER FINDLEY TALLEY, M. D., Birmingham.
8. Miscellaneous business.

Adjournment.

AFTERNOON SESSION.

1. Call to order at 3 P. M.

CONTINUATION OF REGULAR REPORTS.

2. Entero-Colitis of Infants—WILLIAM WADE HARPER, M. D., Selma.
3. Surgery of the Lacerated Cervix and Perineum—WYATT HEFLIN, M. D., Birmingham.

4. Chronic Malarial Poisoning—HENRY ALTAMONT MOODY, M. D., Bailey Springs.
5. Difficult Labors and their Management—THOMAS EDWIN DRYER, M. D., Huntsville.

Adjournment.

EVENING SESSION.

1. Call to order at 8 P. M., in Auditorium.
2. Monitor's Address—G. T. MCWHORTER, M. D., Riverton.
3. Annual Oration—RHETT GOODE, M. D., Mobile.

Adjournment.

Followed by a reception at the Commercial and Industrial Association Club Rooms, tendered by Montgomery County Medical Society.

THIRD DAY—THURSDAY, APRIL 19.

1. Call to order at 9 A. M.
2. Unfinished Business.

VOLUNTEER PAPERS.

1. Retro-Displacement of the Uterus—R. S. HILL, M. D., Montgomery.
2. Ocular Disturbances in Systemic Diseases—C. A. THIGPEN, M. D., Montgomery.
3. Inguinal Hernia—W. F. WESTMORELAND, M. D., Atlanta, Ga.
4. Pneumonia—R. M. FLETCHER, SR., M. D., Madison.
5. Appendicitis and Its Technique—SAMUEL LLOYD, M. D., New York.
6. Injuries Produced in Modern Warfare—R. N. PITTS, M. D., Montgomery.
7. Chronic Interstitial Nephritis: Etiology, Pathology, and Diagnosis—E. A. JONES, M. D., Birmingham.
8. An Outbreak of Small-pox in Etowah County, and its management—E. T. CAMP, M. D., Gadsden.
9. The Influence of Mercury on the Hæmoglobin in Syphilitics—C. T. DRENNEN, M. D., Hot Springs, Ark.
10. Fractures of the Vault of the Skull—T. J. DEAN, M. D., Union Springs.
11. Tubercular Joints in Country Practice, with Reports of Cases—S. W. WELCH, M. D., Alpine.
12. Notes on Surgery of the Brain—W. H. HUDSON, M. D., LaFayette.
13. The Treatment of Puerperal Infection—J. B. KILLEBREW, M. D., Mobile.
14. Report of a Unique Case—W. G. SOMERVILLE, M. D., Tuscaloosa.

15. Treatment of Wounds by Exclusion—W. B. ARBERRY, M. D., Jacksonville.
16. Diagnosis of Cerebellar Tumor, with Report of Case and Operation—B. L. WYMAN, M. D., Birmingham.
17. A Point of View in Therapeutics—T. D. PARKE, M. D., Birmingham.
18. Burns and Their Treatment—W. H. BELL, M. D., Hargrove.
19. Miscellaneous Business.

Adjournment at 1:30 P. M.

AFTERNOON SESSION.

* * * * * * *

Train will leave Union Depot at 2 P. M. for Jackson's Lake, where a barbecue will be given the members of the Association by the Medical and Surgical Society of Montgomery County.

EVENING SESSION.

1. Call to order at 8 P. M.

CONTINUATION OF VOLUNTEER PAPERS.

2. Puerperal Infection, Its Causes and Prevention—SEALE HARRIS, M. D., Union Springs.
3. Some Practical Observations Upon the Value of Vaccination—H. GREEN, M. D., Bolling.
4. Some Neglected Therapeutic Measures—W. H. SANDERS, M. D., Mobile.
5. A Report of Interesting Cases—J. H. GOGGANS, Alexander City.
6. The Need of a Separate Prison for Tuberculous Convicts—W. H. BLAKE, M. D., Wetumpka.
7. Notes on Appendicitis—G. S. BROWN, M. D., Birmingham.
8. Results of Lacerated Cervix Uteri—I. L. WATKINS, M. D., Montgomery.

Adjournment.

FOURTH DAY—APRIL 20.

1. Call to order at 9 A. M.
2. Unfinished and Micellaneous Business.
3. Report of Board of Censors.
4. Revision of the Four Bolls.
   (a.) Revision of the Roll of County Societies.
   (b.) Revision of the Roll of Counsellors.
   (c.) Revision of the Roll of Correspondents.
   (d.) Revision of the Roll of Officers.
5. Election and Installation of Officers.
6. Unfinished and Miscellaneous Business.
7. Adjournment *sine die*.

The Medical Association of the State of Alabama.

THE MINUTES OF THE MEETING OF 1900.

PROCEEDINGS OF THE FIRST DAY.

MONTGOMERY, TUESDAY, April 17.

The Medical Association of the State of Alabama was called to order at 12 M. in the court room of the County Court House by the President, Dr. J. C. LeGrand, of Birmingham.

Invocation was offered by Rev. George B. Eager, of Montgomery.

The President then introduced Dr. J. L. Gaston, President of the Medical and Surgical Society of Montgomery County, who delivered on behalf of the Society the following address of welcome:

ADDRESS OF WELCOME.

Gentlemen of the Medical Association:

In behalf of the Montgomery County Medical and Surgical Society I greet you and extend to you a hearty welcome. Your coming makes us feel at all times that we are favored and the anticipation of it inspires us with new hopes, a greater effort and a more lasting determination not to fall behind in advancing the good work of this Association, which has done so much both for the medical profession and the public good throughout this State. Surely it means something should be added to the credit of this organization when at the end of the

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year 1899 our Health Officer and Committee of Public Health could say there had not been one case of yellow fever in Alabama, while our neighbors on both sides were infected at many points.

This was not luck, but the result of organization and good management.

No city in the State appreciates this more than does Montgomery. The people are loyal to the medical profession, and are orthodox in medical matters. The vagaries of the healing art find here but a poor abiding place. Some whom all would be pleased to see will not be here, and some who were always here have gone to their rest. Dr. Johnston attended but one meeting of the Association after the last meeting in Montgomery, when he presided at this desk. Jerome Cochran did not attend another meeting. It was too easy to see how feeble was his body, but almost incomprehensible was the strength of his master mind. His spirit survives in this Association, and after he has been dead four years only sickness prevents the most distinguished physician in America from coming one thousand miles to lecture as a memorial to his great work. An extensive and interesting programme has been arranged. While you are occupied with this, that your labors may not grow irksome, we have provided for your meeting each other socially when you can renew old acquaintances, make new friends and interchange ideas without the formality of the President's gavel. We shall exert ourselves to make your visit pleasant, and hope we may be so successful that when the day of adjournment comes each one of you will fully have determined to be present when the Association again meets in Montgomery.

President LeGrand next introduced Hon. E. B. Joseph, Mayor of the city of Montgomery, who welcomed the Association on behalf of the city in the following words:

ADDRESS OF WELCOME BY MAYOR JOSEPH.

"*Mr. President and Gentlemen of the State Medical Association:*

"The people of Montgomery are always glad to meet their friends and neighbors assembled to further great purposes or attain great objects, but to our medical friends we take special pride in extending our hands with a grip of most hearty welcome. Besides the fact of knowing you as representatives of one of the highest social and intellectual elements of our citizenship and as genial gentlemen, we recall the names of those Alabamians of your profession, some of whom have been our townsmen, whose genius has illuminated the brightest pages of science, whose achievements have alleviated the suffering of millions, and some of whose works will live long after commemorative marble shall have crumbled into dust.

Nor do we forget that it was your body, led by an honored citizen of Montgomery, which aroused the people of Alabama to the iniquity of a prison system which, exceeding the barbarity of the darkest ages of human history, condemned its criminals to inoculation with the virus of disease, and under the operation of which the death sentence was often the most merciful punishment. You found a system under which the life and health of the convict were turned over to the selfish contractor as hired implements with not even the ordinary requirements of care that the lessor of machinery would insist

upon. You invoked the protecting arm of the State, and now hard labor and confinement or instant death are the penalties for crime and not pain and sickness, shattered health, and lingering death.

The influence of your profession in municipal affairs is exemplified in our beautiful city. To the labor, zeal, and energy of honored members of your Association are we indebted for our magnificent system of sanitary sewerage, for our perfectly organized sanitary department, embracing, as it does, the most modern system of slaughtering animals for food, inspection of meats, milk, and food products, including the most rigid supervision of dairy animals, a thoroughly organized sanitary inspection system under which all private premises are regularly inspected, and the requirement of a complete code of sanitary ordinances strictly enforced.

It is said that in China physicians are only paid for keeping people well. Were this system in vogue in our city its people would be due some of your profession enormous fees.

You can, therefore, feel assured that you are not only among those who greet you as friends and neighbors, but those who recognize you individually and collectively as potent factors in the maintenance of the health, happiness, and prosperity of the people of our State and city.

As the official representative of the people of the Capital City of your great State, I again bid you a most hearty welcome. May your stay in our midst be as pleasant to you as I know it will be to us.

The President then proceeded to deliver his message, as follows:

THE MESSAGE OF THE PRESIDENT,

JOHN CLARK LEGRAND, M. D., BIRMINGHAM,

Grand Senior Counsellor of the Medical Association of the State of Alabama.

Gentlemen of the Medical Association of Alabama:

In obedience to the mandate of the Constitution of our Association, I have the honor, as your presiding officer, of submitting my message.

Meeting, as we do, in this historic city, the capital of our State, the home of culture, the workshop of genius, the laboratory in which so many renowned of our own and other professions have wrought, a place where so much of our commonwealth's history has been made; and gathered, as we are, in our thirty-third annual session, with the glowing sunset of the century gilding with glory the mountain-top achievements attained by our profession, may we not both feel and manifest a thrill of pride because of the impress which this Association has made upon the history of the State and the work it has done in behalf of the health and happiness of her people?

Devotees of other professions, followers of various trades and callings have accomplished much by banding themselves together, uniting their thought and energy in dignifying and strengthening their various pursuits. The lawyers, any two of whom have been likened unto the blades of a pair of scissors, cutting as if it were paper any luckless material that comes between, and yet friends to many penniless unfortunates, meet as we do, to enjoy themselves socially and to improve themselves professionally.

society—an honor his county colleagues were always glad to bestow, because of his noble work in behalf of his profession and his people.

This good man has passed to his reward, which we feel assured is a bright and unfading one, but fortunately the surviving members of the Talladega County Medical Society are animated by the same spirit and zeal in behalf of organized medicine that always inspired him. Ambition for still further progress continues to fire the bosoms of the older members, which, united with the courage and capacity of the younger members, makes this society one of the brightest stars in the galaxy of the county societies in this State.

What has been said of the Talladega County Medical Society could, with equal truth, be said of many or all of the other county societies, if their respective members would but devote to them the best work of which they are capable. That upon the vitality and efficiency of the county societies depend the solidity and prosperity of the State Association is a proposition so important and so true, that it can afford to be repeated many times when we meet in annual session to take counsel together for the future. It is well and wise, therefore, that these pillars be broadened and strengthened, in order that the superstructure of this Association may be solid and symmetrical, and rise to proportions that will challenge generous and just admiration.

Let us pause at this point to inquire whether our system of organization needs to be modified or changed in any essential particular?

The system now has behind it twenty-seven years of practical application, time ample, it is believed, to test its coherency and permanency. That it has firmly withstood this long test and is growing stronger and stronger is a proposition that cannot be successfully denied. Did

time permit, it would be easy to point to numerous and substantial fruits as tangible evidences of the wisdom of the system. Overlooking the broad benefits that have grown out of our system and concentrating their vision upon one or two alleged evils, some of our members are continually clamoring for change. The alleged evils are, we believe, greatly magnified, but admitting their existence, they are insignificant when compared with the benefits that accrue from our system.

Some resolutions, recently adopted by the Jefferson County Medical Society, and which doubtless will be brought to your consideration by the delegates from that society, furnish a renewed instance of the clamor to which I allude. The resolutions read as follows:

"*Resolved*, That it is the sense of this society that the present method of conducting the examinations of applicants for the practice of medicine in Alabama is inefficient, and that we strongly urge that this society should instruct its representatives to the next meeting of the State Medical Association to bring this question before the Association and advise legislation that would correct existing inefficiency in the law.

"*It is further Resolved*, That it is the sense of this Society that no member of an examining board should be in any way connected with a medical school."

Entertaining opposite views to those embodied in the resolutions, and with unshaken faith in our present system, if faithfully and honestly carried out, I am forced to declare the opinion that if the resolutions in question should be concurred in by this Association a serious and, perhaps, fatal blow would be struck at the existence of our present complete public health system in many of the counties in the State.

We believe it to be the duty of every member of our organization in the State to endeavor to remove any defect that may exist in the practical application of our present system, but we do most earnestly appeal to you

not to be led into the support of any measure that has for its object the overthrow of any of the essential features of that system.

The people of the State are to be warmly congratulated upon their escape from an epidemic of yellow fever during the past summer.

No disease to which our people are liable creates more panic, or is in danger of disturbing commerce more, than this, hence the value of protection from an invasion by it is incalculable.

For two summers in succession Alabama has been protected, while several of her neighboring Gulf States have suffered invasion, with all of its attendant evils and losses. Such protection cannot be otherwise than a splendid tribute to both the quarantine system of the State and to its successful administration.

Every one knows that an epidemic of yellow fever means much sickness, many deaths, and a destructive paralysis of commerce.

As has been said, Alabama has been protected from these ruinous evils for the past two summers by the timely and judicious administration of quarantine. Further, I learn that protection was afforded at wonderfully small cost, only thirty-six hundred ($3,600.00) dollars having been expended for State quarantine in 1898, and about six thousand ($6,000.00) dollars in 1899. These amounts are believed to be insignificant when compared with amounts expended by other Gulf States in fruitless attempts to purchase protection. Economy of expenditure is evidently one of the distinguishing characteristics of Alabama's quarantine system.

While rejoicing over our escape from a visitation by yellow fever, I regret to say that smallpox continues to abide with us. This loathsome and preventible disease

has prevailed to a greater or less extent in the State for several years, and unless additional legislation be provided for its control, it will remain with us indefinitely.

At the last session of the General Assembly, earnest but fruitless efforts were made to procure this needed legislation. If statistics are to be relied upon, the value of vaccination as a preventive of smallpox is as firmly established as any other scientific fact in medicine, and to deny it is to convict oneself of gross ignorance or blind prejudice.

The physicians of the State being agreed as to the scientific principle that underlies vaccination, we submit that any recommendations they may make for the purpose of exterminating smallpox should be accepted by the law-makers of the State as furnishing the best possible guide and basis for legislation.

Vaccination whenever enforced has never failed to exterminate smallpox, and we believe never will. The conditions that now confront us with reference to this disease are serious, and demand the application of the most vigorous and radical measures.

I recommend, therefore, that the effort to secure the enactment of a law of compulsory vaccination, with such other legislation as may be needed in that connection, be renewed at the next session of the General Assembly, with the hope that it will prove more successful than before.

While speaking of the public health of the State, it affords me pleasure to testify to the vigilance and efficiency with which the State Health Officer, Dr. W. H. Sanders, has discharged the onerous and responsible duties that devolve upon him. To his prompt and vigorous administration of State quarantine, together with the aid received from local boards and quarantine officials, is due the protection of the State from yellow

fever for the past two summers; and to his activity and personal efforts in the counties in which smallpox has appeared is largely due the fact that this disease has been held in check. His efforts to obtain needed legislation from the last General Assembly for the better protection of the public health were earnest and untiring, and if renewed before the next Assembly will, it is hoped, be followed by greater success.

We have reason to believe that the importance of collecting vital and mortuary statistics in our State is being more and more appreciated, and that the work is being more effectively carried out than at any time in the history of the Association. Those whose special duty it is to do this work should by zealous, systematic, and earnest effort endeavor to make it a complete success.

Alabama has nothing to lose and much to gain by publishing her health statistics to the world. If official figures can be made to proclaim the healthfulness and salubrity of her climate, capital and labor will seek her mines, her forests, and her fields more than ever before, and the present tide of prosperity will swell into a steady, permanent, and majestic stream.

The law of the State makes it compulsory for all contagious and infectious diseases to be reported by the health authorities. Typhoid fever should be placed on the list of diseases to be so reported, in order that investigation might be made as to the conditions producing the disease, and such action taken as might prevent its spread.

In this connection, your attention is called to an able and instructive report of an outbreak of typhoid fever at Riverton, in this State, by Dr. McWhorter, which report, accompanied by a well-drawn map, appeared in the last volume of Transactions of this Association. The lessons so forcibly expressed therein are very valuable,

and will amply repay you for re-reading the report. In the light of what is there so clearly established, as well as from other sources, as to the causation of typhoid fever, I recommend that the Association adopt such measures as will require the physicians throughout the State to report to their respective county health officers every case of typhoid fever that may come under their observation.

To my mind, the medical profession owes no higher duty to the people than that of studying and ferreting out the causes that destroy health, dethrone reason, and impair the physical functions. Statistics have shown, over and over again, that the excessive use of alcohol has done more, perhaps, than any other agent in producing disease. Recognizing the great injury which this seductive, but stupendous evil, has inflicted, and the misery and poverty which have resulted therefrom, the question arises: Can we, as physicians, accomplish anything by advising the people and the law-makers of the State on the subject?

It is claimed that neither prohibition, nor the dispensary system, reaches the core of the evil and eradicates it. To what remedy, then, shall we turn for complete and permanent relief? As civilization advances and moral convictions deepen, we may expect marked improvement.

Education, then, is the great reforming force that must reach and remove the evil. Let it be judiciously and radically applied through every channel that can impress the minds and touch the hearts of the people.

Just as the virgin soil is the one into which roots strike deepest and take firmest hold, so, young minds constitute the most favorable soil in which to sow the seeds of truth and temperance.

A text book, containing clear, concise, and just ac-

counts of the evil effects of the excessive use of alcohol upon man's physical, moral, and mental nature, should belong to the curriculum of our common schools, and every child should be required to become familiar with its teachings. Good seed of this kind planted in the minds of the children of the land would soon bud into convictions and resolutions that in due time would bear the fruit of the highest types of physical, mental, and moral manhood.

In this work of education, the doctors should bear a conspicuous part. They are brought face to face with the wretchedness, the poverty, and the depravity which intemperance entails, and, therefore, should wage relentless war on it with every weapon they can wield. They may teach by lectures and by admonition, but, above and better than all, by example, a force which, though dumb and speechless, is far more potent than words, however well chosen or warmly spoken.

In all of their meetings, the doctors should boldly proclaim their advocacy of all feasible methods for abating the evils of intemperance, and thus openly ally themselves with a cause entitled to their warmest and most active support.

But to work out reform in the ways mentioned, would necessarily be a slow process, and, therefore, its fullest benefits would lie in the distant future.

What shall be done to rescue the victims of today—men who have so lost their moral courage as to render themselves powerless to throw off the thraldom of debauchery and vice which enslaves them?

These men cannot wait for the slow process of reformation already mentioned; a friendly hand must be held out to them while there is yet time to save them.

A sanitarium for the treatment of such cases, supported by the State, would, in my opinion, be the means

of rescuing many victims from the mastery of intemperance and of placing them upon the solid ground of self-control. To maintain such an institution would be a just and judicious use of the people's resources, and would be the means of sending joy and gladness into households where now hover poverty, ignorance, and misery.

But this question is too broad to admit of adequate discussion within the limits of an address such as this. Therefore, I commit it to your thoughtful consideration, with the hope that you will ever stand ready not only to support measures that promise reform, but that you will evolve such measures and become leaders in carrying them into successful execution.

The communicability of tuberculosis is rapidly becoming an established doctrine.

Experimental investigation and clinical observation have furnished so much scientific and practical testimony in support of this idea that sanitarians are insisting that measures be enforced for the purpose of limiting, as far as possible, the propagation of the disease through this channel. That is to say, isolation of persons laboring under tuberculosis is now regarded as a sanitary measure which the protection of the unaffected loudly demands.

Among the convicts of Alabama tuberculosis is a frequent and fatal disease.

In the light of advanced ideas as to the propagation of this disease, already mentioned, it is obviously improper, yea criminal, to place tuberculous and non-tuberculous convicts in the same prison.

It must not be forgotten that convicts are human beings, and being deprived of their liberty, and therefore of the privilege of protecting themselves, they are on that account the more entitled to all of the protection

which science and humane treatment can throw around them.

In furtherance of the ideas expressed, I recommend that this matter be brought to the attention of the Governor and the Board of Convict Commissioners, coupled with the request that provision be made for separating in the prisons of Alabama the tuberculous from the non-tuberculous convicts.

There is a class of unfortunate persons for whom the State makes no provision; neither are private hospitals provided for them in Alabama. I refer to epileptics—a class of afflicted persons who certainly deserve consideration and care.

Dr. Spratling, Superintendent of the Craig Colony for epileptics, of Sonyea, N. Y., recently read a paper on the care of epileptics before the Jefferson County Medical Society, in which he advocated that a "Colony" should be established by each State, for the care and treatment of this class of unfortunates. With our growing population, and with the development of our rich resources, now rapidly taking place, the revenues of the State will certainly become largely increased in the near future, and, therefore, will justify more liberal appropriations than have been made in the past for the sick and afflicted.

Dr. Spratling has well said that "what New York and Massachusetts have done on a large scale, other States can do in proportion to their strength and ability."

Our State has provided liberally for her insane, for her deaf, dumb, and blind.

Will she utterly neglect her epileptics—a class of persons often incapable of taking care of themselves, and who not infrequently fall as heavy burdens upon friends who are unable to properly provide for them?

I recommend that this Association take such action as will present the claims of this class of unfortunate persons to the next General Assembly, with the hope that some steps may be taken toward making provision for them.

In recent years attempts have been made to morbidly excite the public mind as to the horrors and cruelties of experimentation upon animals for scientific purposes.

Doctors know and appreciate the value of vivisection, and therefore should antagonize to the utmost all efforts on the part of over-sensitive people to render it illegal for animals to be utilized in developing great scientific, pathological, and therapeutic principles.

Dr. Keen, the President of the American Medical Association, has issued a very stirring address on this subject to the medical profession of the country, from which I beg to quote as follows:

"The cause of humanity and of scientific progress is seriously menaced. Senator Gallinger has again introduced into Congress the bill for the 'Further Prevention of Cruelty to Animals in the District of Columbia,' which he has so strenuously and misguidedly advocated in the last two Congresses. * * * * It is speciously drawn to seem as if it were intended only in the interest of prevention of cruelty to animals, but the real object is the passage of similar bills in all the State Legislatures.

"It hardly needs to be pointed out that this would seriously interfere with, or even absolutely stop, the experimental work of the Bureau of Animay Industry, and of the three medical departments of the government, the Army, the Navy, and the Marine-Hospital Service.

"The animals themselves might well cry out to be saved from their friends. No more humane work can be done than to discover the means of the prevention of

diseases which have ravaged our flocks and herds. * *

"The inestimable value of these scientific researches as to the prevention and cure of disease among human beings, it is superflous to point out. Modern surgery and the anti-toxin treatment of diphtheria alone would justify all the vivisection ever done."

Dr. Keen's address closes by a strong appeal to the medical profession of the country, and especially to the organized medical bodies, to spare no effort to defeat the obnoxious bill.

I recommend that this Association instruct the State Board of Censors to address a letter, setting forth the importance of vivisection to the medical profession and the people, to our Senators and Representatives in Congress, and urging them to make every effort to defeat Senator Gallinger's bill.

The inauguration by our Southern medical colleges of the four year curriculum, as a pre-requisite for graduation, marks an era of progress in their work, and places them in this respect on a par with the most advanced colleges of the country.

Naturally, this longer course of study will afford our young men time to do better justice to the broad and ever-broadening science of medicine, and, therefore, to better equip themselves for doing battle against disease.

We need the re-enforcement which these young graduates may annually bring to our ranks to aid us in marching to the final victory that awaits organized and legal medicine in Alabama.

Entering upon their life-work after the increased educational advantages referred to, they should courageously step upon a high plane of ethics, and resolve to stand there, immovable to every selfish or sordid motive.

The Code of Ethics of the American Medical Association is the guide as to our conduct toward one another, toward our patients, and in respect to the honorarium to be received for our services. The spirit that dominates the Code is to place the profession of medicine above that of a trade.

I fear there is a growing disposition on the part of some members of the profession to violate this spirit. One of the most dangerous directions which this disposition is taking is that of what is called "contract practice."

Some years ago the Association adopted an ordinance on this subject, in which certain forms of "contract practice" were made legitimate and ethical. This departure from the old rule of requiring a separate fee for each separate service rendered was deemed to be justified by new conditions attaching to the laborers in the mines and factories and upon farms and railroads. In drafting the ordinance an effort was made to protect the privilege granted from abuse, but this effort seems not to have been altogether successful.

For instance, in permitting practice by contract for the hired laborers of a corporation, or an industrial institution of any kind, it was expressly declared that the "contract" should not include practice for the owners and salaried officials thereof. Rumors are in circulation that this provision is being grossly violated.

Owing to these rumors, as well as to bad tendencies in the policy of doing practice by contract at all, I recommend that the entire subject of "Contract Practice" be reconsidered by this Association, and such action taken thereon as it may deem fit.

Shortly after my official career began, Dr. Baldwin, for a long time an efficient member of the Board of Cen-

diseases which have ravaged our flocks and herds. * *

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Owing to these rumors, as well as to bad tendencies in the policy of doing practice by contract at all, I recommend that the entire subject of "Contract Practice" be reconsidered by this Association, and such action taken thereon as it may deem fit.

Shortly after my official career began, Dr. Baldwin, for a long time an efficient member of the Board of Cen-

sors of this Association, tendered his resignation. In doing so, he wrote as follows:

"I hereby tender my resignation as a member of the Board of Censors. As I am not now in active practice, I feel that there are others who are more entitled to the place, and better able to be useful to the Association."

In accepting Dr. Baldwin's resignation, I expressed the thanks of the Association for the faithful services he had rendered as a member of the Board of Censors, and the hope that he would continue his identity with the Association.

To temporarily fill the vacancy thus created, I appointed Dr. W. M. Wilkerson, of Montgomery, a gentleman believed to possess qualities that admirably fit him for the position.

At this meeting, it will become our duty to permanently fill the position for the remainder of Dr. Baldwin's unexpired term.

Fellow-members: I now turn away from the discussion of matters of business that appeal to your judgment, and beg to remind you of a cause that I feel sure will appeal to the tenderest and most responsive chords of your hearts.

Nearly four years ago, Jerome Cochran, the author of our splendid system of organization, and the able and tenacious promoter of its success, fell, with the harness of duty upon him, and went to his grave crowned with the chaplet of victory in the cause for which he had labored so long and so faithfully.

This Association, moved by a profound appreciation of the value of his life-work, resolved to erect to his memory some suitable monument that will tell to posterity the story of his achievements.

The leader who fights a battle and wins a brilliant victory, the statesman who by eloquence and diplomacy

safely guides the ship of state through storms of danger, justly receives the warm praises and lasting gratitude of his countrymen.

Shall the memory of a man who was a great public benefactor be permitted to pass into oblivion, because, forsooth, he was a doctor?

At a memorial exercise held in honor of Dr. Cochran during the annual meeting of this Association at Selma, in 1897, Mr. McLeod, an able attorney of that city, said "* * * * the people of Alabama owe a debt of gratitude to Jerome Cochran that would bankrupt them to pay."

Let the doctors of Alabama, then, freely open their hearts and their purses, and soon a memorial, worthy of the dead and creditable to the living, will rise up to proclaim that noble deeds are not forgotten. If, upon investigation, it shall appear that the finances of this Association will so justify, I recommend that a liberal appropriation be made from that source, say, one thousand dollars, which, added to voluntary contributions, would soon create a fund ample for the purpose in view.

In closing, permit me to thank you most cordially for the honor of being your presiding officer, and to wish that this meeting may be guided by wise counsels, and garnished by pleasant social commingling.

May we give and receive new inspiration for our work, may we fall in love more and more with our chosen profession, and appreciate more fully than ever before the great advantages and opportunities of this Association. United in purposes of fidelity to the aims of our organization, and anxious to keep pace with the progress of medicine, may each of us be a blessing and a benediction to suffering humanity.

The report of the Senior Vice-President, Dr. S. H. Lowry, of Huntsville, was next in order. That officer not having arrived, owing doubtless to the interruption of travel, caused by the very heavy floods now existing, the hearing of his report was informally passed over. Although presented at a later stage of the meeting, the Report appears here in the regular place for such reports:

REPORT OF THE SENIOR VICE-PRESIDENT,

SAMUEL HICKMAN LOWRY, HUNTSVILLE.

Grand Senior Counsellor of the Medical Association of the State of Alabama.

Mr. President and Gentlemen of the Medical Association of the State of Alabama:

Under the rules and requirements of this Association it becomes the duty of each of the Vice-Presidents to make a report of the status and medical work done in the different counties coming under the jurisdiction of each.

In submitting my annual report as Senior Vice-President of the Medical Association of the State of Alabama, I have endeavored, as best I could, to get reports from the thirty-three counties of the northern division of the State. My report is made entirely through correspondence, and by means of reports obtained from the Secretaries and members of the different county medical societies, in answer to letters of inquiry, asking for the information.

I think it is a mistake and great oversight on the part of the Association in not having a greater number of Vice-Presidents. As it is now, the work has to be done

almost entirely by correspondence, which is not always satisfactory, and is always an *up hill* business.

If we had as many as six vice-presidents, assigning to each a limited number of counties, it would be possible, for each one to visit every county in his division, and thus get a full, complete, and satisfactory, report from each county.

Doctors, as a rule, are hard workers, and busy men; be that as it may, I know they will not take the time, nor trouble to reply to a circular, or private letter, asking for the desired information, relating to the work of their county societies, even though a self-addressed, stamped, envelope for a reply be sent.

After much time spent and many letters written I have succeeded in getting reports from 27 counties out of the 33 comprising the northern division. The counties not replying to circular nor letters are Cleburn, Morgan, Pickens, Tallapoosa and Winston.

From the reports I have received, I give the following:

BIBB COUNTY MEDICAL SOCIETY.—In reply to my letter of inquiry my reporter says: Bibb county is doing fairly well; a little better than last year.

Regular quarterly meetings are held. Four regular meetings were held during the last year, at which papers were read, cases reported and discussed, and a decided interest was shown in the work of the society. The average attendance was eight members. There were seventeen active members; two more than last year. There are three regular doctors in the county who are not members of the Society. One illegal practitioner in the county. Three young men from this county attending lectures, one at Birmingham, one at Mobile, and one at Nashville.

The Health Officer of Bibb County is Dr. L. C. Peacock; his salary is $125.00 per year, and he has succeeded fairly well in collecting vital statistics.

BLOUNT COUNTY MEDICAL SOCIETY.—Blount County Medical Society is still not quite up to the standard in medical work. It seems they are not thoroughly organized, have no regular place of meeting, etc. However, they prosper, and do try to hold regular quarterly meetings. The membership of the Society is 14. Four meetings were held last year, with an average attendance of six, a falling off from the previous year.

Dr. F. N. Hudson is Health Officer; his salary is $75.00 per annum. Like all of our county health officers, he has great difficulty in getting the doctors and mid-wives to send in their reports, hence his work is not as satisfactory to him as it might be.

There are twelve regular doctors in the county who are not members of the Society. No illegal practitioners in the county. Four medical students attending lectures from the county.

CALHOUN COUNTY MEDICAL SOCIETY.—My reporter from Calhoun county says that the doctors evince very little interest in the county society, or in the State Association. He says they had great difficulty in securing delegates to attend the Mobile meeting last year, and do not expect to be represented at Montgomery this year at all.

The membership of the Society is twenty. They hold regular quarterly meetings. Three meetings were held last year, with an average attendance of six members.

Dr. J. M. Whiteside is the Health Officer, who gets a salary of $200.00 per annum. He is an active, earnest worker, and has had very good success in his work.

There are sixteen regular doctors in the county who

are not members of the society. No illegal doctors in the county. No medical students in the county.

CHEROKEE COUNTY MEDICAL SOCIETY.—I am sorry that Cherokee county does not come up to its usual good standard this year. Last year the secretary wound up his reports by saying, "Our society today is on a better road to success than it has been in eleven or twelve years." This year he is not nearly so enthusiastic about it, does not even tell me what the membership of the Society is. They hold regular meetings every six weeks. Eight meetings were held last year, with an average attendance of twelve. Dr. R. L. McWhorter is County Health Officer with a salary of $150.00 per annum, and has done his work well, and had moderately good success in getting up vital statistics. There are eleven regular physicians in the county who are not members of the society. Three illegal doctors in the county. Three medical students attending lectures from Cherokee county.

CLAY COUNTY MEDICAL SOCIETY.—Considering the disadvantages the doctors of Clay county have to labor under, I think we may say Clay county is doing very well, and fully up to the average. Nearly one-half of the members live from five to twenty-five miles from the place of meeting, and when they do attend they have to go by private conveyance over rough roads. The membership is fourteen. They hold regular quarterly meetings. Three meetings were held last year, with an average attendance of about six members. The health officer is Dr. Thomas Northern; his salary has recently been increased from $25.00 to $50.00 per annum, and with this encouragement he is reviving the interest in the meetings and in collecting vital statistics. Only one regular physician, not a member of the society, and he is superannuated. No illegal doctors in the county. Two medical students attending lectures from this county.

COLBERT COUNTY MEDICAL SOCIETY.—Colbert County Medical Society is in the same apathetic condition as last year, or worse. There seems to be a complete lack of interest among the doctors. Failing to get reports from either the secretary or health officer, my friend Dr. Edgar Rand, of Leighton, furnished me with the few facts at his command. The membership of the society is eleven. They propose to hold quarterly meetings. Three meetings were held this year with an average attendance of five. Dr. H. P. Thompson is health officer; his salary is $100.00 per annum. My informant says he seems to be zealous in trying to get up reports and vital statistics, but don't know what success he has had. There are about fifteen regular physicians in the county who are not members. No illegal doctors in the county, and no medical students from this county.

CULLMAN COUNTY MEDICAL SOCIETY.—This society is still doing good work, and is in a very healthy condition. The membership of this society has been thirteen until lately; since the 1st of January of this year, they have received three new members, making a total of sixteen members in good standing. They hold meetings regularly on the 1st Monday of every month. Twelve meetings were held last year, with an average attendance of six members, and at nearly every meeting cases were reported and papers read and discussed. The county health officer for this year is Dr. John Yielding; his salary is $100.00 per annum, and I understand he is doing very satisfactory work, and up to date had been very successful in collecting vital statistics. There are now seven regular physicians in the county who are not members of the society. There are two so-called hypnotists and one illegal doctor in the county. Two medical students from Cullman, one in Birmingham, and one in Mobile.

COOSA COUNTY MEDICAL SOCIETY.—Coosa County Medical Society is still trying to do better; the membership is twelve, two more than last year. They hold regular quarterly meetings; however, only two meetings were held last year, with an average attendance of five members. Owing to lack of railroad facilities, the doctors have to ride either in buggy or on horseback so far to attend the meetings, that we can very readily understand the small attendance. There are two regular physicians in the county who are not members of the society. Dr. J. W. Pruitt is the health officer, with a salary of only $5.00 per annum. He has had only fairly good success in collecting vital statistics, but he bids fair to do better, as he is active and is pushing his work with greater vigor. There are seven regular physicians not members of the society. No illegal doctors. Two medical students from this county.

DEKALB COUNTY MEDICAL SOCIETY.—The report from DeKalb shows that this society is just about as it was last year. The membership falls off two every year. This year the membership is ten, last year it was twelve, and year before last it was fourteen. They have no regular time for meeting, sometimes monthly and sometimes quarterly. Five meetings were held last year with an average attendance of six members. There are ten regular physicians in the county who are not members. No illegal doctors in this county. Dr. Nicholson is health officer; his salary is $125.00 per annum. He makes an efficient officer and does his work well. There are no medical students from DeKalb county.

ETOWAH COUNTY MEDICAL SOCIETY.—I am glad to report Etowah County Medical Society as doing splendidly, and fully abreast with the times. My reporter says, "Our society is in good working order, our meetings are very interesting indeed, and we have made a

very decided improvement and progress in the past two years. The membership of the society is eighteen. Hold regular monthly meetings; eight meetings were held last year, and at every meeting papers were read and discussed, and cases reported. Dr. E. T. Camp is health officer, with a salary of $200.00. He is a faithful, energetic worker, and has had good success in collecting vital statistics. There are nine regular physicians in the county, who are not members of the society. No illegal doctors in the county. No medical students from this county.

FAYETTE COUNTY MEDICAL SOCIETY.—My report from Fayette sounty is very satisfactory and quite flattering. My reporter says, "Our society, although small numerically, is in a very healthy condition. Its members are all not only intelligent physicians, but what is of almost equal importance, gentlemen who stand well in their respective communities. The membership of the society is ten. Hold quarterly meetings, and the members are, as a rule, punctual in their attendance, and take quite an interest in the meetings. Four meetings were held last year, with an average attendance of six. Dr. M. R. Seay is the health officer, whose salary has recently been increased from $50.00 to $100.00. He is an efficient officer and realizes the importance of his work, and does it thoroughly. There are only two regular physicians in the county who are not members of the society, one of whom has made application and his name will be presented for membership at this month's meeting. There are no illegal doctors in Fayette county. Four young men attending medical lectures.

FRANKLIN COUNTY MEDICAL SOCIETY.—My report from this county is very poor and unsatisfactory. In reply to my letter, my reporter says: "I do not consider that we have in this county a medical society, but only a

make-shift, and a slim one at that, so much so that I shall not attempt to answer your questions; we have done no good, and continue in the same course. It is possible that a few of us may reorganize in the spring, and if so, we may do better." I finally got the following report from the secretary: Membership of the soicety is about sixteen, hold no regular meetings. One or two meetings held last year; attendance six members. Health officer receives no salary and has done no good. One regular doctor not a member of society. Two or three illegal doctors in the county.

JACKSON COUNTY MEDICAL SOCIETY.—My report from Jackson county shows a general condition of apathy, a want of harmony and concert of action among the members of the profession. I believe you will always find this the case, wherever you find a majority of the doctors in the county who are not members of the county society. These doctors are always more or less indifferent and seem to take no interest whatever in the work of collecting vital statistics, and sometimes even positively refuse to report at all. There are only twelve members of the society and sixteen regular physicians in the county who are not members. So you can very readily see where the trouble comes in. They propose to hold monthly meetings, but only eight meetings were held last year, with an average attendance of six members. The health officer gets a salary of $150.00, but has had poor success in his work, owing to a want of cooperation among the doctors. One illegal practitioner in the county. Two medical students attending lectures from this county.

LAMAR COUNTY MEDICAL SOCIETY.—The report from Lamar county is not quite so good as last year. Shows a falling off in membership of three, and an increase in number of regular physicians who are not mem-

bers of the society. The membership is eleven. They hold quarterly meetings. Only three meetings held last year, with an average attendance of nine members. There are thirteen doctors in the county who are not members of the society. One illegal doctor in the county. The health officer is Dr. W. L. Elliott; his salary is $60.00 per annum. My reporter did not know what success, if any, he has had in collecting vital statistics.

LAUDERDALE COUNTY MEDICAL SOCIETY.—I am very glad indeed to give a better report from Lauderdale county this year, for, last year, I failed to get any report at all. The membership of the society is twenty-one. They hold regular quarterly meetings; four meetings held last year, with an average attendance of twelve members. Dr. P. I. Price is the county health officer; he gets a salary of $100.00 per annum. He is an honest, faithful, worker, and tries hard to discharge his duties, but has had rather poor success in collecting vital statistics. There are five regular physicians in the county who are not members of the society. Three or four illegal practitioners. One osteopath and one magnetic healer. There are two medical students attending lectures from this county.

LAWRENCE COUNTY MEDICAL SOCIETY.—Lawrence County Medical Society is still trying, and is doing very well in upholding the medical work in the county. The membership of Lawrence County Medical Society is fifteen. They hold regular quarterly meetings. However, only three meetings were held last year, with an average attendance of eight members. Dr. W. J. McMahon is the county health officer, whose salary is $100.00 per year, and although he is very energetic and a faithful worker, he has had poor success in getting the doctors and mid-wives to report. There are three regular physi-

cians who are not members of the society. No medical students from Lawrence.

LIMESTONE COUNTY MEDICAL SOCIETY.—I am afraid Limestone county is beyond redemption, for although my reporter gives the membership as twelve, still he says they have not held a meeting in three years. There are seven regular physicians in the county who are not members of the so-called society. No illegal doctors in the county. Dr. W. J. Hagan is health officer. Don't know what salary he gets, if any. There are three medical students attending lectures from this county.

MADISON COUNTY MEDICAL SOCIETY.—Madison County Medical Society is one of the banner county societies of the Sttae. The society is doing good work all the time, and is in an unusually flourishing condition. The membership is twenty-nine. They meet monthly. Twelve meetings were held last year, with an average attendance of thirteen members. At every meeting papers are read and important cases reported and discussed freely by the members. Five new members have been added to the society during the past year. Dr. J. P. Burke has been president for several years, and recently was unanimously re-elected to succeed himself; he is a very zealous worker and takes a great interest in the society. Dr. W. C. Wheeler is health officer; salary $200.00. He is a *hustler* and has succeeded finely in his work. There are only about eight regulars in the county who are not members. Two homeopathists. No illegal doctors in the county. Four medical students from Madison county.

MARION COUNTY MEDICAL SOCIETY.—The reports I succeeded in getting from Marion are very meagre and conflicting, and I am constrained to believe they are doing no good at all, although one of my reporters gives a membership of fifteen and says they hold quarterly

meetings; four meetings held last year, with very poor attendance. Another of my reporters says that the work of the Board of Censors is very unsatisfactory; that they license everybody that wants to practice medicine, regardless of merit, and do not even require the presence of the applicants. Hence as I said in the beginning Marion is in a deplorable condition.

MARSHALL COUNTY MEDICAL SOCIETY.—I am sorry to have to report Marshall county as not up to its usual standard this year. The membership of the society is twelve. The president writes me that he has failed on several occasions to get enough present to hold a meeting. Only two meetings were held last year, with an attendance of five members. Dr. S. M. Elrod is health officer, who gets a salary of $40.00. This is the first time Marshall county has ever allowed a salary for health officer. There are six regular physicians in the county who are not members of the society. Two illegal practitioners. There are four medical students from this county.

RANDOLPH COUNTY MEDICAL SOCIETY.—Randolph Society is in a good condition and working nicely. They have a membership of twenty-four, and hold regular quarterly meetings, with from two to four reporters at each meeting, and quite a lively interest is taken in the meetings. Three meetings were held last year with an average attendance of ten members. Dr. P. E. Dean is health officer and gets a salary of $75.00, and although his salary is small, still he is faithful and honest and does good work and never fails to send up a complete vital statistics report. There are five regular physicians in the county who are not members of the society. No illegal doctors. Two medical students from this county.

SHELBY COUNTY MEDICAL SOCIETY.—Shelby County Medical Society is in good working order and still try-

ing to do better. The membership of the society is sixteen. Holds regular monthly meetings. Ten regular meetings were held last year, with an average attendance of seven members. Dr. J. H. Green is health officer; his salary is $160.00 per annum; he is a faithful, energetic worker and has had very good success in collecting vital statistics. There are sixteen regular physicians in the county who are not members of the society. One illegal doctor in the county. Several medical students from this county, but my reporter failed to say how many.

ST. CLAIR COUNTY MEDICAL SOCIETY.—I am sorry I cannot report any improvement in St. Clair County Medical Society over last year. No interest at all seems to be taken in the society. They have not had a meeting in more than a year. The secretary refers me to the Transactions of 1899 for any information I want. He says the health officer is doing moderately well, without any salary.

TUSCALOOSA COUNTY MEDICAL SOCIETY.—Tuscaloosa County Medical Society is fully up to the average. The membership is twenty. They propose to hold monthly meetings, but only seven meetings were held last year, with an average attendance of seven members. Dr. R. Nielson is health officer, whose salary is $180.00 per year. He spends most of his time in this work, and has had fairly good success. There are seventeen regular physicians in the county who are not members of the society. No illegal doctors in the county. Two medical students attending lectures from this county.

TALLADEGA COUNTY MEDICAL SOCIETY.—Talladega County Medical Society promised last year to do better this year, and I believe they have tried. The membership is five more than last year, being now twenty-six. They hold quarterly meetings, although they report five meet-

ings held last year, with an average attendance of fourteen members. Dr. W. T. Hamilton is county health officer; he has the co-operation of the doctors and of course has had good success in collecting vital statistics. His salary is $125.00. There are eleven regular practitioners in the county who are not members of the society. No illegal doctors in the county. Five medical students from this county.

WINSTON COUNTY MEDICAL SOCIETY.—My report from Winston county is not at all flattering. The membership of the society is only five. Meet twice a year, with an average attendance of three members. Two meetings were held last year. The health officer gets only $40.00 a year salary and has done practically no work. Does not even attend the meetings of the society. There are six regular practitioners in the county who are not members of the society. The County Board takes no interest in their work, and of course has accomplished nothing. Evidently there is something wrong in Winston county.

This closes my report for the Northern Division of the Alabama State Medical Association.

The Report was referred to the Board of Censors.

Dr. S. G. Gay, of Selma, the Junior Vice-President, then presented his report, which here follows:

REPORT OF THE JUNIOR VICE-PRESIDENT.

SAMUEL GILBERT GAY, M. D., SELMA.

Senior Counsellor of the Medical Association of the State of Alabama.

Mr. President and Gentlemen of the Medical Association of the State of Alabama:

In accordance with the rules of this Association, I beg to submit my report as Junior Vice-President, comprising, as it does, the second or southern division of the State.

During the year just closed my chief efforts have been directed toward securing better salaries for the county health officers, and increasing the membership in the county societies, of my division. To these ends letters were addressed to all physicians of good standing, who were not members of their respective county societies, urging them to become members, and thus identify themselves with the organized profession of the State. Through these efforts, I am able to report an increase of sixty to the membership of the county societies in my division. In this connection, I desire to express my thanks to the officers of the county societies for material assistance and cordial co-operation rendered. Without such co-operation my efforts might have proved futile.

I also addressed letters to the probate judges of all counties in which the salaries appropriated for their health officers were less than two hundred dollars per annum, and appealed to them to use their influence for an increase of such salaries. Many answers were re-

ceived to these letters, in most of which the promise was made to lay the matter before the county commissioners. What fruit this effort has borne I am unable to say, but fear that an increase of salary has not been generally made. The probate judge of Chilton county informed me that his county needs no better protection than it now has. I may state that this county provides no salary whatever for a health officer, and has none.

I am glad to be able to state that after very persistent effort I have succeeded in getting reports from every county in my division. In one county I wrote to every physician whose name appeared in the Transactions as a member of his society, and to some of them I wrote three times, but at last was rewarded with a reply.

Summing up the general situation, I may say that in some counties there has been encouraging advancement; in others, matters remain at a standstill; and in the remainder, organization exists only in name.

With the idea of shortening my report, and, therefore, of consuming as little of your time as possible, I have modified the method of reporting, and instead of taking up each county in alphabetical order and commenting upon its status and work, I shall group the counties into classes, and thus make one comment apply, as far as possible, to several or more of them. Such counties as require special remarks wil be discussed separately.

The following classification will be adopted:

Class 1 will include those counties in which organization and work are reported *good.*

Class II will include those counties in which organization and work are reported *fairly good.*

Class III will include those counties in which organization and work are reported as wholly unsatisfactory.

Class IV will include those counties in which organization is reported as loose and irregular, with little or no work being accomplished.

Under Class I it affords me pleasure to name the following counties: Barbour, Baldwin, Bullock, Conecuh, Dallas, Elmore, Mobile, Montgomery, and Pike—9.

There is a total membership in these counties of 228, there having been an addition of 25 members during the past year. The societies of Montgomery and Mobile counties hold weekly meetings; those of Bullock, Dallas, and Pike meet monthly, and those of Baldwin, Elmore, and Conecuh meet quarterly. At these meetings there is an average attendance of from 25 to 75 per cent. of the members, essays are read and discussed, and cases are reported.

In Baldwin the society has adopted a rule requiring each member to read, or in case of enforced absence, to forward a paper to be read before the society at each meeting. Violation of this rule involves the official censure of the society; continued violation involves expulsion. I regard this rule as too stringent when the distances which the physicians of that county must travel in order to attend meetings are considered.

There are 81 regular physicians in these counties who are not members of their respective societies, but efforts have been made to induce them to become members. Bullock and Conecuh enjoy the distinction of having on their respective rolls of membership all of the regular physicians residing in their respective counties. A total of 27 students from these counties are attending medical colleges. In none of these counties have preliminary examinations for the study of medicine been made. In six of the counties, namely, Barbour, Baldwin, Conecuh, Dallas, Elmore, Mobile, two examinations each for license to practice medicine have been made. In Bullock, Montgomery, and Pike, no examinations have been made.

In all of these counties there are health officers, but

Baldwin, Montgomery, and Mobile, are the only ones that pay anything approaching adequate salaries. The health officers of these counties are reported as doing good work, but they do not succeed in collecting vital and mortuary statistics altogether as well as they wish, owing to indifference on the part of some physicians in reporting.

The Boards of Censors in all of these counties are reported as active in attending to their duties. Improvement is reported in the society work of all of these counties except Barbour, which has lost some of its members by removal, but a healthy feeling exists among the remaining members, who will endeavor to maintain their former standard of vitality and work.

Seven of these counties, namely, Baldwin, Bullock, Conecuh, Dallas, Elmore, Mobile, and Pike, report their county jails in good sanitary condition, and the inmates supplied with abundance of good food and water.

Barbour and Montgomery report the sanitary conditions of their jails as bad. The board of health of Barbour county have made a special report on this subject to their county commissioners and hope for early improvement.

Six of these counties, namely, Bullock, Conecuh, Elmore, Mobile, Montgomery, and Pike, are supplied with poor houses in good sanitary condition, and report their inmates as being well cared for. Barbour county, although supplied with a poor house, reports its sanitary condition as bad. Baldwin and Dallas counties have no poor houses, but provide for their poor by monthly and quarterly allowances made through the county commissioners.

There are two illegal physicians in Pike, but no steps have been taken to prosecute them.

Before closing my report of the counties belonging to

this class justice compels me to express the opinion that the Bullock County Society continues to merit the distinction of being the banner society of my division.

Class II. In this Class the following counties are included: Butler, Clarke, Coffee, Escambia, Hale, Henry, Macon, Marengo, Russell, and Sumter—10.

The societies of these counties are in a fair state of organization and have done fairly good work. They endeavor to meet quarterly; have a total membership of 156; with an average attendance at their meetings of from 25 to 60 per cent. of their members. In 50 per cent. of these societies, essays on medical subjects are read and cases reported; in the others, essays are read occasionally, but they do not adhere to any very regular programme at their meetings.

There has been an increase of membership in Coffee of 10; in Hale, of 3; in Henry, of 8; in Marengo, of 6; in Russell, of 2; in Sumter, of 3—total, 32. There are fifty-two physicians in this group of counties who are not members of their respective medical societies. Most of these societies have made efforts to induce these outsiders to become members.

There is a total of twenty-four students from these counties attending medical colleges. One examination for license to practice medicine has been held in Coffee; 4 in Hale; 4 in Russell; 1 in Sumter—total, 10.

In all of these counties—except Macon and Coffee—there are health officers, whose salaries range from fifty to two-hundred and fifty dollars per annum. Macon and Coffee have appropriated no salaries, but they nominally have health officers. Russell has for the first time appropriated a salary ($250.00) for her health officer. The presence of small-pox in the county brought this about. The Boards of Censors in all of these counties, except Clarke and Marengo, are reported as being attentive to

their duties. The collection of vital and mortuary statistics is generally imperfectly done in these counties. Coffee, Hale, Henry, and Sumter, report improvement in the condition of their respective societies; Marengo and Russell, also, report slight improvement. One student has undergone preliminary examination for the study of medicine in Coffee, two in Hale, two in Marengo.

Russell, Clarke, Butler, Coffee, Escambia, and Hale report the sanitary conditions of their jails as good; Henry, Macon, Marengo, and Sumter, as poor.

Butler, Coffee, Hale, Henry, and Sumter report the sanitary condition of their poor houses as good, and the inmates supplied with abundant food and pure water. In Macon the condition is unsatisfactory. In Escambia, Marengo, and Russell, the poor are cared for by contract. Received no information on this subject from Clarke.

Illegal physicians are practicing in the following counties: Escambia 3, no steps taken to prosecute; Hale 1, prosecuted, fined, and discontinued practice; Henry 4, have been prosecuted, but without success; Marengo 3, no steps to prosecute; Russell 1, has been prosecuted.

Class III. In this group of counties the organization of the medical societies and work accomplished are reported as wholly unsatisfactory. The counties are: Geneva, Lowndes, Lee, Monroe, Perry, and Washington. In Geneva an effort is made to meet quarterly; Lowndes, Monroe, and Perry meet semi-annually; Washington meets annually; Lee, only when called. These counties have a total membership of 73, with an average attendance at their society meetings of from 25 to 60 per cent. At the meetings of the societies of Lee, Monroe, Perry, and Washington counties essays are sometimes read, and interesting cases reported; at the meetings in Geneva and Lowndes nothing in this way is attempted. There

are 28 regular physicians in these counties who are not members of their respective societies, and no special efforts have been made by the members to induce them to join. One addition to the membership of Perry county is reported. Geneva, Lowndes, and Perry have two students each attending medical colleges; Monroe, has three; Lee and Washington, one each—total, 11. Lowndes, Lee, and Perry, report their boards of censors as attentive to their duties. None of the counties in this group report any substantial improvement in their work.

Geneva, Lowndes, Monroe, and Washington, pay their health officers from $25.00 to $100.00 annually. Lee and Perry have provided no salaries.

In 50 per cent. of the counties belonging to this group no effort is made to collect vital and mortuary statistics. All report the sanitary conditions of their jails and poor houses as good, except Monroe, which has no poor house, but provides for her poor by contract. Unable to secure any report from Lowndes and Washington on this head.

Geneva has three illegal physicians, whose names have been handed to the solicitor, but they were not prosecuted; Washington has one, no steps taken to prosecute.

I am glad to be able to state that the commissioners of Dale County have for the first time appropriated a salary for a county health officer, the amount of it being two hundred dollars per annum.

This action was prompted, I am satisfied, by the presence of small-pox in the county. The county health officer is now making efforts to collect vital statistics, and there are hopes for improvement in the work of this county.

Class IV. This group of counties comprises those in which organization is reported as loose and irregular, with little or no work being accomplished.

I regret to feel compelled to place the following counties in this class: Autauga, Chilton, Crenshaw, Choctaw, Covington, Greene, and Wilcox. None of these counties report meetings as having been held in the past year. Chilton county has promised to reorganize and hold quarterly meetings, and I have very recently heard that a meeting for reorganization has been held in Greene. There is a membership of 8 in Autauga, 9 in Chilton, 17 in Crenshaw, 11 in Choctaw, 7 in Covington, no report received of membership in Greene and Wilcox. There seems to be no effort made to improve the work of these societies.

In Greene the society is in a very paralyzed condition, but the board of censors meet when called and give attention to business.

The Covington society has had one addition to its membership in the past year. Students are attending medical colleges from these counties as follows: From Autauga, 2; from Chilton, 3; from Choctaw, 1; Wilcox 6—total 12. Autauga, Choctaw, Wilcox, and Covington have held one examination each for the issuance of license to practice medicine. Autauga, Choctaw, and Covington have health officers who receive small salaries. In the other counties no salaries are paid, nor is there any attempt made in them to collect vital and mortuary statistics.

My informants report that in the counties of Autauga, Chilton, Crenshaw, and Choctaw the boards of censors are reasonably attentive to their duties. The following counties report the sanitary condition of their jails as good: Autauga, Chilton, Choctaw, Covington, and Wilcox. No report received on this subject from Crenshaw and Greene.

Choctaw and Wilcox report the sanitary condition of their poor houses as good. The poor in Chilton are cared

for by contract. No report received from Autauga, Crenshaw, Covington, and Greene.

In grouping the counties in this report I have endeavored to class them according to merit, based upon the best information I could obtain. If I have been unjust in any way to any county it will afford me great pleasure to make correction whenever the error is pointed out.

Mr. President and Gentlemen: The report of my year's work is before you. To collect the data from which to make it has required constant work and extensive correspondence, but feeling that the cause for which we are striving is a noble and worthy one, my labor has been cheerfully and freely given, with the hope that in the end we will achieve all of the aims set forth in our Constitution.

All of which is respectfully submitted.

In accordance with rule the Report was referred to the Board of Censors.

The Annual Report of the Secretary, Dr. G. P. Waller, was then submitted:

ANNUAL REPORT OF THE SECRETARY.

To the President and Members of the Medical Association of the State of Alabama:

In submitting this, my annual report, I beg to say that the work which has passed through my office for the year just ended has been of the usual routine character.

All of the counsellors elected at the last meeting of this Association except Dr. H. W. Blair, of Colbert County, and Dr. B. S. Warren, of Barbour county, have qualified themselves by paying their dues and signing the counsellors pledge. Information has been received since the meeting that Dr. Warren has removed from the State, which, doubtless, explains his non-aceptance of the position.

Last year, a paper on the Prophylactic Treatment of Tuberculosis, read before the Association by Dr. T. A. Casey, of Albertville, failed to appear in the published volume of Transactions.

The failure was due to an accidental misplacement of Dr. Casey's paper, for which no one could be properly blamed. Later, the paper was found, and due explanation made to Dr. C., for its non-appearance. The Secretary recommends that this paper be published in the next volume.

In March, the usual annual circular letter, containing notification of this meeting, and giving instructions to the secretaries of county societies as to the preparation of their reports, was sent to each of the twelve hundred (approximately) members of the county societies; and in April the programme of this meeting was sent to the same addresses, also, to correspondents, and to the Secretaries of the State Medical Associations of other States.

In preparing the programme for publication the name of Dr. J. H. Abraham, of New York, was unintentionally omitted. Without going into details as to how this happened the Secretary feels justified in claiming that the blame does not properly fall upon him. He regrets the oversight, which happened in a singular way, and hopes that when the reading of "Volunteer Papers" has been reached on the programme an early opportunity of reading his paper, will be accorded Dr. Abraham.

In February last, arrangements were made with all of the railroads in the State to transport members to and from this meeting at reduced rates.

With the co-operation of the President and the Senior Censor the badges needed for this meeting were ordered and are now ready for use.

One of the greatest difficulties the Secretary has to contend with, in the practical discharge of his duties, is to obtain absolutely correct lists of members of the county societies. Experience has taught that these lists are frequently defective and erroneous.

Pardon me for mentioning an instance: The Secretary of a county society reported in 1898 a membership of 18, giving the names of the members; in 1899 the same Secretary of the same society reported a membership of only 12, again furnishing the names. Your Secretary was complained of by a member of the society in question for having made gross errors in publishing the report. Upon investigation, it was found that the report had been published precisely as sent in, (except a slight error in one name), that is, the secretary of the county society had wrongly entered six names in his report; instead of putting these names in the list of the society members, he had placed them in the list of non-members. This is but one

instance of the numerous difficulties of this kind that arise and for which the Secretary generally receives unjust criticism.

An earnest appeal is hereby made to the secretaries of the county societies to exercise great care in making their reports, for, upon the correctness of the lists of members furnished much depends.

If each county society would require its secretary to submit the annual report that is to be sent up to this Association to the society for verification and endorsement, before being forwarded here, many or all of the errors complained of would be avoided.

All monies due this Association are payable to the Treasurer, Dr.Dr. H. G. Perry, of Greensboro, and not to the Secretary. If members will bear this rule in mind much confusion and delay will be avoided.

Another practical difficulty arises to which the Secretary desires to especially call the attention of the members. Complaints are sometimes made on the part of members of county societies that they have not received their volumes of Transactions, and naturally they lay the blame upon the Secretary of this Association. The Secretary desires, here and now, to disclaim any responsibility for these delays or failures. Unquestionably, blame must rest somewhere; the question is where? In answer, the Secretary will say that with rare exceptions the blame rests upon the secretary of the county society, and consists in the failure of said secretary to furnish the Treasurer, Dr. Perry, with a list of those members who have paid their dollar dues, and are, therefore, entitled to receive the volume.

If these lists are furnished to the Treasurer the Secretary can obtain them from him, and can ship the volumes accordingly. If said lists are not furnished to the Treasurer, then the Secretary cannot obtain them, and, therefore, is not in possession of the necessary shipping information. Suppose a county society has a membership of ten, five of whom pay their dollar dues, and, therefore, are entitled to receive the volume of Transactions, and the other five do not pay their dues, and are not so entitled. In a case of this kind it is not sufficient for the Secretary simply to transmit to the Treasurer five dollars, and state that it is for five volumes of the Transactions, as is frequently done. Evidently he must furnish the names of the members who paid their dues, else the Secretary cannot know to which five of the ten members to send the volume.

The Secretary begs pardon for dwelling upon this matter, but, as simple as it is, much confusion and dissatisfaction have resulted

from the want of a clear understanding of it. It is hoped that in the future no further trouble will arise on this point.

All exchanges and printed documents, received during the year, have been placed in the office of the State Board of Health.

Respectfully submitted,

G. P. WALLER, M. D., Secretary.

Dr. H. G. Perry, the Treasurer, not having arrived on account of the floods, the hearing of his Report was informally passed over.

Having been made at a later period of the meeting, it appears here in the usual place for such Reports.

THE REPORT OF THE TREASURER.

Mr. President and Gentlemen of the Medical Association of the State of Alabama:

In an effort to systematize the duties of my office, the Secretary and I decided before the last meeting that the Treasurer should secure lists of those members of the county medical societies who had paid their dollar dues, and were entitled to the Transactions.

The correctness of these lists is essential, as without proper shipping lists, some members fail to receive the Transactions for which they have paid. The furnishing of these lists involves some care upon the part of the Treasurer of the county societies, but does not give any of them anything like the trouble which the Secretary and Treasurer of the State Medical Association experience in overcoming any neglect that may occur.

There have been numerous complaints to me during the past year from members who had not received their Transactions. In every such case the matter has had my respectful and prompt attention.

In most cases the fault has been due to failure of the county officers to supply correct lists.

In the case of the counties of Autauga, Clarke, Escambia, Fayette, Hale, Marion and Talladega, I must plead guilty of being the cause of delay in shipping. These counties furnished lists in Mobile, which were misplaced by me, necessitating much correspondence to procure new lists.

Another cause of delay existed by my having sent lists to the Secretary. I had no recourse but to write for new lists, if any question arose.

So, this year I have provided printed blanks to be filled in duplicate by the Treasurers of county societies, and receipts for county dues will not be given until said lists are filed with me. By having duplicate lists, one can be kept in my office for reference and the other furnished the Secretary, by which the distribution of the Transactions can be properly and promptly made.

I would call attention to the fact that when I properly receipt for the dues and have furnished the Secretary with a correct list of those who have paid, my connection with the distribution of the Transactions ceases.

I urge each member of every county society to assist me in securing correct lists.

A matter I wish to bring to the attention of the Counsellors is that their dues are payable in *advance*, either at the meeting of the Asociation or shortly thereafter. Many are in the habit of waiting until the annual meeting to pay for the year then ending.

Strictly speaking, such Counsellors are not entitled to vote at the current meeting; nor to receive Transactions, because we cannot tell which of them will eventually become delinquent.

And then, the Treasurer's report is a part of the first day's proceedings, and it cannot be made complete until it is known who will and who will not pay.

I have had to alter my figures a number of times since my arrival here.

This is not as it should be. When I close my books and make out my report, before the meeting, it should be finished, and perfect.

Some months ago, I called the attention of the president to the fact that there is in the Treasury a surplus of more than a thousand dollars. This amount is lying on hand and is not a source of any income to the Association. I would respectfully suggest that the Board of Censors take some action on this matter.

The following named counsellor failed to pay his dues: Dr. A. J. Coley, Alexander City.

Drs. H. W. Blair and B. S. Warren, who were elected Counsellors last year, failed to qualify and pay their dues.

Seven county societies, namely, Butler, Covington, Franklin, Greene, Lee, Limestone and Wilcox, are delinquent in dues.

Henry Gaither Perry, M. D., Treasurer, in account with the M. A. of S. A., from April 18th, 1899, to April 17th, 1900.

Received from Grand Senior Counsellors:

Baldwin, B. J.	$ 10 00
Bragg, Shirley	10 00
Brockway, D. S.	10 00
Cason, D. E.	10 00
Fletcher, R. M.	10 00
Franklin, C. H.	10 00
Goggans, J. A.	10 00
Goode, Rhett	10 00
Goodwin, J. A.	10 00
Harlan, J. J.	10 00
Hayes, R. H.	10 00
Hill, L. L.	10 00
Huggins, J.	10 00
Inge, H. T.	10 00
Jay, A.	10 00
Jones, C. C.	10 00
Kendrick, J. C.	10 00
LeGrand, J. C.	10 00
Lowry, S. H.	10 00
Maréchal, E. L.	10 00
Nolen, A. J.	10 00
Reddin, R. J.	10 00
Searcy, J. T.	10 00
Sholl, E. H.	10 00
Sledge, W. H.	10 00
Stovall, A. M.	10 00
Thetford, W. F.	10 00
Thomas, J. G.	10 00
Treut, P. G.	10 00
Whaley, L.	10 00
Wheeler, W. C.	10 00
Wilkinson, W. M.	10 00
Robertson, T. L.	10 00
Total number, 33. Total amount	$ 330 00

RECEIVED FROM SENIOR COUNSELORS.

Andrews, G.	10 00
Bell, W. H.	10 00

Blake, W. H.	10 00
Bondurant, E. D.	10 00
Brown, G. S.	10 00
Cameron, M. B.	10 00
Coley, A. J.	.....
Cunningham, R. M.	10 00
DeWeese, T. P.	10 00
Duggar, R. H.	10 00
Gay, S. G.	10 00
Harper, R. F.	10 00
Heacock, J. W.	10 00
Heflin, W.	10 00
Hill, G. A.	10 00
Hunter, H. M.	10 00
King, G.	10 00
McCants, R. B.	10 00
McLaughlin, J. M.	10 00
Moody, H. A.	10 00
Moore, W. H.	10 00
Parke, T. D.	10 00
Perry, H. G.	10 00
Quin, W. E.	10 00
Riggs, E. P.	10 00
Williams, J. H.	10 00
Watkins, T. L.	10 00
Whitfield, B. W.	10 00
Wilkerson, C. A.	10 00
Wilkinson, J. E.	10 00

Total number, 30. Paid, 29. Total amount paid.....$ 290 00

RECEIVED FROM JUNIOR COUNSELLORS:

Brannon, H. L.	$ 10 00
Bennett, B. F.	10 00
Davis, W. E. B.	10 00
Desprez, L. W.	10 00
Dixon, J.	10 00
Dryer, T. E.	10 00
Frazier, T. H.	10 00
Goodman, D. W.	10 00
Graham, W. A.	10 00
Harlan, A. L.	10 00

Harrison, W. G.	10 00
Henley, A. T.	10 00
Howle, J. A.	10 00
Hill, R. S.	10 00
Johnson, L. W.	10 00
Jones, J.	10 00
Jones E. S.	10 00
McCain, W. J.	10 00
McEachern, J. A.	10 00
Moody, F. I.	10 00
Pearson, B. R.	10 00
Robinson, T. F.	10 00
Sims, A. G.	10 00
Sutton, R. L.	10 00
Swan, J. C.	10 00
Waller, George P.	10 00
Whitfield, J. B.	10 00
Wyman, B. L.	10 00
Total number, 28. Total amount	$ 280 00

FROM COUNSELLORS ELECT:

Bancroft, J. D.	$ 5 00
Blair, H. W.	....
Gaston, J. L.	5 00
Guice, C. L.	5 00
Henderson, S. C.	5 00
Justice, O. S.	5 00
Pride, W. T.	5 00
Warren, B. S.	....
Welch, S. W.	10 00
Total number, 9. Total amount	$ 40 00

RECEIVED FROM DELEGATES:

Autauga—M. D. Smith, Prattville	$ 5 00
Baldwin—Sibley Holmes, Tensas	5 00
Barbour—C. L. Guice, Harris	5 00
B. S. Warren, Clayton	5 00
Bibb—J. S. Moore, Six Mile	5 00
Blount	....
Bullock—W. S. Britt, Midway	5 00

C. M. Franklin, Union Springs	5 00
Butler—J. A. Kendrick, Greenville	5 00
Calhoun—A. A. Green, Anniston	5 00
B. D. Williams, Oxford	5 00
Chambers	....
Cherokee—R. H. McGee, Round Mountain	5 00
Chilton—	....
Choctaw—	....
Clarke—A. S. Pugh, Grove Hill	5 00
Clay—C. S. Northen, Ashland	5 00
Cleburne—J. W. Kaylor, Arbacoochee	5 00
Coffee—N. W. Ham, Elba	5 00
Colbert—H. W. Blair, Sheffield	5 00
Conecuh—W. Watson, Repton	5 00
Coosa—A. J. Peterson, Hanover	5 00
Covington—	....
Crenshaw	....
Cullman—G. Hartung, Cullman	5 00
Dale—	....
Dallas—R. P. Chisholm, Summerfield	5 00
R. M. Cochran, Eleanor	5 00
DeKalb—C. W. Wright, South Hill	5 00
Elmore—O. S. Justice, Central	5 00
N. B. Sewell, Buyck	5 00
Escambia—S. C. Henderson, Brewton	5 00
P. H. M. Tippins, Brewton	5 00
Etowah—J. B. Liddell, Gadsden	5 00
Fayette—J. D. Young, Fayette	5 00
Franklin—	....
Geneva—	....
Greene—	....
Hale—D. J. Castleman, Greensboro	5 00
E. P. McCollum, Greensboro	5 00
Henry—W. M. Ryals, Cowarts	5 00
W. H. Williams, Dothan	5 00
Jackson—	
Jefferson—J. T. Harwell, Ishkooda	5 00
E. P. Lacey, Bessemer	5 00
Lamar—D. C. Morton, Vernon	5 00
Lauderdale—	
Lawrence—	

Lee—	
Lowndes—	
Limestone—	
Madison—B. E. Graham, Gurley	5 00
W. T. Pride, Madison	5 00
Macon—P. Reynolds, Warrior Stand	5 00
Marengo—A. P. McArthur, Rembert	5 00
A. Lee Barron, Sweet Water	5 00
Marion—J. R. Burleson, Hamilton	5 00
Marshall—T. A. Casey, Albertville	5 00
Mobile—J. T. Inge, Mobile	5 00
P. J. M. Acker, Mobile	5 00
Monroe—J. F. Busey, Jones' Mill	5 00
G. G. Scott, Mt. Pleasant	5 00
Montgomery—J. L. Gaston, Montgomery	5 00
L. D. Robinson, Montgomery	5 00
Morgan—F. B. Hunter, Falkville	5 00
Perry—S. T. Whitfield, Uniontown	5 00
O. L. Shivers, Marion	5 00
Pickens—H. L. Williams, Dunbar, Miss	5 00
Pike—J. M. Watkins, Tarantum	5 00
Randolph—	
Russell—	
Shelby—	
St. Clair—	
Sumter—J. D. Bancroft, Sumterville	5 00
Talladega—J. T. Kent, Fayetteville	5 00
Tallapoosa—I. D. Nolen, New Site	5 00
Tuscaloosa—	
Walker—	
Washington—Charles LeBarron, Yellow Pine	5 00
Wilcox—	
Winston—	

To Dues from County Medical Societies—

Autauga	$ 6 00
Baldwin	4 00
Babour	15 00
Bibb	11 00
Blount	8 00
Bullock	15 00

Butler	
Calhoun	20 00
Chambers	5 00
Cherokee	10 00
Chilton	2 00
Choctaw	6 00
Clarke	9 00
Clay	7 00
Cleburne	11 00
Coffee	12 00
Colbert	7 00
Conecuh	10 00
Coosa	8 00
Covington	
Crenshaw	6 00
Cullman	12 00
Dale	14 00
Dallas	19 00
DeKalb	8 00
Elmore	15 00
Escambia	7 00
Etowah	18 00
Fayette	5 00
Franklin	
Geneva	5 00
Greene	
Hale	9 00
Henry	15 00
Jackson	11 00
Jefferson	75 00
Lamar	10 00
Lauderdale	9 00
Lawrence	3 00
Lee	
Limestone	
Lowndes	8 00
Macon	6 00
Madison	20 00
Marengo	18 00
Marion	7 00
Marshall	9 00
Mobile	25 00
Monroe	8 00
Montgomery	34 00
Morgan	8 00

Perry	5 00
Pickens	1 00
Pike	12 00
Randolph	21 00
Russell	7 00
Shelby	7 00
St. Clair	6 00
Sumter	10 00
Talladega	9 00
Tallapoosa	7 00
Tuscaloosa	19 00
Walker	12 00
Washington	2 00
Wilcox	
Winston	4 00
Total	$673 00

MISCELLANEOUS—

Dr. J. F. Peavy, Ashville, N. C	1 00

RECAPITULATION.

RECEIPTS.

To balance on hand last report		$1,168 44
To Annual dues 90 Counsellors	$900 00	
" 59 Societies	673 00	
" 57 Delegates	285 00	
To Amount Dr. J. F. Peavy. Asheville N. C	1 00	
To Annual Dues 7 Counsellors elect	40 00—	
Total		$3,067,44

DISBURSEMENTS.

By Geo. Waller, salary as Secretary	$ 250 00	
A. H. Montgomery, Ass't Sec., Mobile Ses.	20 00	
H. S. Austin, Sgt. Arms, Mobile Session	9 00	
H. T. Inge, Chairman Committee of Arrangements, Expenses, Mobile Session	69 70	
H. G. Perry. by order B'd Censors	23 75	
Cabaniss & Weakley, Attorneys	50 00	
Parker & Golson, Attorneys	30 00	
Brown Printing Co., pub. Transactions	854 25	
" " " mailing "	188 71	
H. G. Perry, salary as Treasurer	100 00	
" " postage "	10 00	
G. P. Waller for badges, Montg'y Session	20 00—	$1,625 41
Balance on hand		$1,442 30

It was ordered that the Report and Books of the Treasurer be referred to the Board of Censors.

The report of the Publishing Committee was next in order.

Dr. Waller, the Chairman of the Committee, explained that in order to complete the Report it was necessary to have access to the books of the Treasurer, and that officer not having arrived, the committee would ask further time in which to submit its Report. Request granted.

REPORT OF THE PUBLISHING COMMITTEE,

To the President and Members of the Medical Association of the State of Alabama:

As soon as practicable after the adjournment of the last meeting of this Association the Publishing Committee requested bids from several large printing establishments for the publication of the annual volume of Transactions. Upon comparing the terms offered, the bid made by the Brown Printing Co., of this city, was considered the best, consequently the contract was awarded to that firm, the price at which they proposed to do the work being practically the same as that paid for similar work by the State Medical Asociations of New York, New Jersey, Massachusetts, and Connecticut.

After the contract was awarded some delay was caused in procuring the quality of paper agreed upon, as paper of this quality and in the quantity needed is not kept in stock, but must be manufactured after the order for it has been received.

Some other delays occurred which were unavoidable and need not be mentioned now.

After the printing had been completed a very serious

obstacle arose in the distribution of the volumes to the members of many of the county societies entitled to them. This was due to defective "shipping lists," or to the entire absence of such "lists," as to many of the counties.

The committee must know what members of county societies have paid their dollar dues before they can know to whom to send volumes. If all paid, then it would be easy, but when some pay and some do not, and neither the secretary nor treasurer of the Association is notified as to which members do pay, the Publishing Committee can not possibly decide to whom to send volumes.

The secretary of the Association, who is chairman of the Publishing Committee, has written many letters to some of the counties to obtain correct shipping lists and has had great difficulty in getting satisfactory answers to many of these letters. For the tardiness in the distribution of the volumes of Transactions, after the printing was completed, the Publishing Committee is not responsible.

The cause of delay lies in the difficulty already pointed out. An effort will be made at this meeting to prevent the recurrence of this difficulty in the future.

All exchanges and periodicals received have been filed in the office of the State Board of Health.

The expenditures made by the Publishing Committee for stationery, printing, distributing Transactions, etc., for the year now closing, amount to ten hundred and eighteen dollars—for which the treasurer has in his possession itemized vouchers.

All of which is respectfully submitted.

G. P. WALLER, M. D.
H. A. MOODY, M. D.
W. H. SANDERS, M. D.
Publishing Committee.

Dr. Glenn Andrews, Chairman of the local Committee of Arrangements, gave notice of the programme of social entertainments that had been arranged by the Montgomery County Medical Society for the members and visitors of the Association, and cordially invited all to participate in these, and expressed the hope that they would prove pleasant relaxations from the severer duties of the meeting.

Dr. J. P. Furniss, of Selma, moved that the privileges of the floor be extended to Dr. Lloyd, of New York, and to Dr. Westmoreland, of Atlanta, two prominent members of the profession, both of whom are present.

Dr. R. S. Hill, of Montgomery, moved to amend the motion by including any other visitors present.

The mover of the original motion accepted the amendment, and the motion, as amended, was adopted.

On motion the session was adjourned.

EVENING SESSION.

The Association was called to order at 8:30 by President LeGrand, who announced the Historian's Address as the first order of business.

Dr. M. B. Cameron, of Sumpterville, who was to deliver this address not having arrived, on account of "washouts" on some of the railroads, the delivery of his address was postponed.

[The obstacles in Dr. Cameron's way proved impassable, consequently he did not arrive during the meeting, but subsequently forwarded his manuscript, which will be found printed in the Appendix of Medical and Sanitary Dissertations and Reports.—Sec'y.]

The President announced as the next order of business a paper on Acute Poleomyelitis by Dr. E. D. Bondurant, of Mobile.

Dr. Bondurant read his paper, which was discussed by Dr. E. L. Maréchal, of Mobile, and Dr. J. D. S. Davis, of Birmingham.

The paper will be found in the Appendix.

Dr. W. M. Jordan, of Birmingham, from whom the next paper was due, not being present, the president announced as the next order a paper by Dr. W. G. Harrison, of Talladega.

Dr. Harrison stated that he desired to exhibit some charts in connection with the reading of his paper and not having had time, since arrival, to have them tacked up in the hall, and further, as daylight would be required for the charts to be seen to advantage, he asked that the hearing of his paper be postponed to the morning session of tomorrow. On motion, this request was granted.

The Surgery of the Brain by Dr. J. D. S. Davis, of Birmingham, was the next subject to be presented.

Dr. Davis began his address, but in a few minutes complained of feeling too ill to continue, and asking to be excused, retired from the hall.

The president then announced as the next theme on the programme: The Prevention of Tuberculosis, by Dr. W. C. Maples, of Scottsboro.

Dr. Maples not having arrived, on account of the interruptions to travel, the hearing of his paper was necessarily postponed.

Dr. W. D. Gaines, of LaFayette, who was to read the next paper on the programme, not being present, his subject was necessarily passed over.

There being no other regular reporters present, who

desired to present their papers, Dr. T. J. Dean, of Union Springs, said that his name was on the list of Volunteer Reporters, and that in the regular order his paper could not be reached until Thursday. Having important engagements at home, he desired to leave as early as possible, therefore, he asked the privilege of reading his paper now. On motion, the privilege was granted and Dr. Dean read a paper on Fractures of the Vault of the Cranium. The paper will be found in the appendix.

The hour for adjournment not having arrived, Dr. E. H. Sholl, of Birmingham, proposed the subject of La-Grippe for discussion, and proceeded to open the discussion by giving an interesting account of his recent observations of that disease.

Dr. Sholl's suggestion proved a happy one, for the subject aroused the interest of the Association, as shown by the discussion that followed.

Drs. Huddleston, Sanders, Cunningham, Killough and Wilkinson, D. L., participated in the discussion. The session was then adjourned.

PROCEEDINGS OF THE SECOND DAY.

WEDNESDAY, APRIL 18—MORNING SESSION.

The Association was called to order at 9 A. M., by President LeGrand.

Under the head of unfinished business, Dr. Waller, the Secretary, read a telegram from Dr. Osler, of Baltimore, expressing regret that illness would prevent him from attending the meeting, and, therefore, would deprive him of the honor of delivering the Jerome Cochran Lecture.

The Secretary also read a letter from Dr. G. T. McWhorter, of Riverton, who was to deliver the Monitor's Address at this meeting, stating that sickness in his own family would deprive him of the pleasure of being present. He stated, however, that the manuscript of his address as Monitor had been forwarded to the President for such disposition as might be made of it.

Dr. Sanders moved that the Secretary be instructed to reply to the two communications just read, and to express the regret of the Association that the gentlemen could not be with us and bear the prominent parts assigned them on the programme.

The motion was adopted.

Dr. C. H. Franklin introduced to the Association Dr. J. T. Jelks, of Hot Springs, Ark., and moved that the courtesies of the floor be accorded him.

The motion was adopted.

Before proceeding with the hearing of the regular reports the President stated that he regretted to announce that Dr. J. D. S. Davis was too unwell to be present today, and, therefore, would be unable to complete the discussion of his subject, commenced last night.

The President then announced as the next order a paper on Uric Acid, by Dr. C. W. Wilkerson, of, Montgomery. Dr. Wilkerson read his paper, which was discussed by Dr. Wyman, of Birmingham, and Dr. Jelks, of Arkansas.

The paper, with the discussion thereon, will be found in the Appendix.

At this point, Dr. Sanders asked the privilege of interrupting, for a few moments, the regular proceedings, which being granted by the chair, he then introduced to the Association Dr. W. P. McIntosh, a Surgeon of the Marine Hospital Service.

Dr. Sanders said that Dr. McIntosh was present by invitation, and as the official representative of his service—a service very prominently connected, as all know, with the public health interests of the country. Dr. Sanders moved that the courtesies of the floor be accorded to Dr. McIntosh.

The motion was adopted, and the courtesy tendered was acknowledged by Dr. McIntosh.

Dr. Sholl said that Dr. Westmoreland, a prominent surgeon of our sister State, Georgia, is present as a visitor, and that his name appears on the programme for a paper to be presented tomorrow. Learning that it would be quite an accommodation to Dr. Westmoreland to be accorded a hearing today, Dr. Sholl moved that the regular order be now suspended, and that Dr. Westmoreland be permitted to read his paper at this time.

The motion was adopted; whereupon, Dr. Westmoreland proceeded to read a paper on Inguinal Hernia.

Dr. Sanders expressed pleasure at having Dr. Westmoreland present as a fraternal visitor from an adjoining State, and said, further, that in pronouncing the opinion that Dr. Westmoreland's discussion of his theme was complete and the conclusions reached sound, he felt sure he was reflecting the unanimous opinion of the members of the Association.

The paper will be found in the Appendix.

The attention of the President was called to the fact that the Treasurer—Dr. Perry—had not yet arrived, and that the interests of the Association required that a Treasurer *pro tem.* be appointed; whereupon, the President appointed Dr. Waller, the Secretary, to act as Treasurer until Dr. Perry could arrive.

The President then called upon Dr. W. G. Harrison, of Talladega, to read his paper, postponed from the evening session of yesterday.

Dr. Harrison responded, and proceeded to read a very elaborate paper on Some Recent Studies in the Diagnosis and Treatment of Fever, with Special Reference to the So-Called Typho-Malarial Type. The paper was illustrated by large and handsomely executed charts, which could be seen from all parts of the hall.

The hour of eleven having arrived during the reading of Dr. Harrison's paper, attention was called to the special order for that hour—the Jerome Cochran Lecture—but as Dr. Osler, who was to deliver the Lecture, could not be present, motion was made and adopted that Dr. Harrison proceed with the reading of his paper.

Dr. Harrison's paper was discussed by Dr. Harper, of Selma.

The paper, and a brief report of Dr. Harper's discussion thereof, will be found in the Appendix.

Dr. Maples, of Scottsboro, having arrived, the President called for his paper, postponed from the evening session of yesterday.

Dr. Maples responded, and read on The Prevention of Tuberculosis. The subject was discussed by Drs. Wyman, Cunningham, Sholl, and Trent.

The paper, with brief reports of the discussion thereon, will be found in the Appendix.

The subject of Simple Inflamation of the Eye as Observed by a Busy Practitioner was passed, Dr. Dowling, who was to present a paper on this subject, not being present, and it being understood that he had removed from the State.

Dr. D. F. Talley, of Birmingham, presented the next paper, subject: Fistula in Anno.

Dr. Harper, of Selma, and Dr. Rogers, of Birmingham, discussed the subject. The paper, with brief reports of the discussion thereon, will be found in the Appendix.

The session was then adjourned.

AFTERNOON SESSION.

The Association was called to order at 3 P. M., by the President.

First paper read was by Dr. W. W. Harper, of Selma, on Entero-Colitis in Infants. The paper was discussed by Drs. Harrison, Talley, and Whiteside; Dr. Harper closing the discussion. The paper, with brief reports of the discussion thereon, will be found in the Appendix.

Surgery of the Lacerated Cervix and Perineum was the title of a paper next read by Dr. Wyatt Heflin, of Birmingham. This paper was discussed by Drs. Hill, (R. S.), Watkins, Jelks, and Brock, the discussion being closed by Dr. Heflin.

The paper, with a brief report of the discussion thereon, will be found in the Appendix.

The next subject on the programme was Chronic Malarial Poisoning.

Dr. H. A. Moody, of Bailey Springs, who was to present a paper on this subject, not having arrived, on account of complete interruption of travel on some of the railroads, the subject was passed, with the hope that Dr. Moody, who was known to be on the way, would arrive in time to discuss the subject.

Dr. T. E. Dryer, of Huntsville, next presented a paper on Difficult Labors and Their Management.

The paper, and a brief report of the discussion of it by Dr. Trent, Sr., of Roanoke, will appear in the Appendix.

The President gave notice that the evening session would be held in the Auditorium for the purpose of hearing the addresses of the Monitor and annual Orator. He requested that all of the officers of the Association and all of the ex-presidents and ex-vice-presidents thereof would occupy seats on the rostrum.

The session was then adjourned.

EVENING SESSION.

President LeGrand called the Association to order in the Auditorium at 8:30, a fair audience of the citizens of Montgomery being present, in addition to the members of the Association.

In the absence of Dr. McWhorter, President LeGrand placed the manuscript of the Monitor's Address in the hands of Dr. Sholl, who read it in his customary clear style.

Following this, Dr. Goode, of Mobile, delivered the annual Oration, taking as his theme: Quarantine—Maritime and Land.

Both of these addresses will be found printed in the Appendix.

The exercises of the evening were enlivened by vocal and instrumental music, very artistically rendered by some of Montgomery's most noted amateurs.

After adjournment at the Auditorium the members and visitors repaired to the rooms of the Commercial and Industrial Association, where they were elegantly entertained at a "Reception," tendered by the Montgomery County Medical Society, many of the ladies and gentlemen of Montgomery being present.

PROCEEDINGS OF THE THIRD DAY.

THURSDAY, April 19—MORNING SESSION.

The Association was called to order at 9 A. M. by the President, who announced Volunteer Reports as the regular order.

Dr. R. S. Hill, of Montgomery, read a paper on Retro-Displacement of the Uterus, which was discussed by Drs. Heflin and Cunningham, of Birmingham.

Dr. Hill failed to furnish a copy of his paper for publication.

At this point, the President interrupted the regular proceedings to announce the following Committee on Nomination of Counsellors: Dr. B. L. Wyman, of Birmingham; Dr. V. P. Gaines, of Mobile; Dr. A. M. Stovall, of Jasper; Dr. Andrew Jay, of Evergreen; Dr. D. E. Cason, of Ashville.

Attention was called to an omission in the printing of the programme of proceedings for this day, an explanation of which was given in the annual report of the Secretary.

The omission consisted in the failure to insert the name of Dr. J. H. Abraham, of New York, who proposed to present a volunteer paper.

Dr. Abraham being present, it was moved and adopted that the privilege of reading his paper be now accorded him.

Dr. Abraham then read an elaborate and interesting paper on Acute Follicular Tonsillitis, which was discussed by Drs. Sholl, Thigpen, Wilkinson (D. L.), Brown, Hudson, Williams, Parke, Moon, Robertson, and Trent, the discussion being closed by the author of the paper.

The paper and a part of the discussion thereon will be found in the Appendix.

Dr. C. A. Thigpen, of Montgomery, next read a paper on Ocular Disturbances in Systemic Diseases.

As Dr. Thigpen failed to furnish a copy of his paper for publication, it does not appear in the Appendix.

The next paper was on Pneumonia, by Dr. R. M. Fletcher, Sr., of Madison. This paper was discussed by Drs. Wyman, Inge, Talley, and Maples.

The paper, and the discussion thereon, in part, appears in the Appendix.

Dr. W. G. Harrison called attention to the fact that there are two papers among those yet to be read bearing upon the subject of Appendicitis, namely, the one next in order, by Dr. Lloyd, of New York, and one to be read later on by Dr. Brown, of Birmingham.

Dr. Harrison moved that Dr. Brown's place be advanced on the programme, and that his paper be read immediately after that of Dr. Lloyd, in order to permit of both papers being discussed together. The motion was adopted.

Dr. Lloyd then read his paper on Appendicitis and its Technique, followed by Dr. Brown on Notes on Appendicitis.

The papers were discussed together by Drs. Harrison and Goggans.

The session was then adjourned.

Afternoon Session.

The Association held a thoroughly informal session during the afternoon, the officers being dethroned, and 'word sent down the line' that the Committee of Arrangements of the Montgomery County Medical Society were in supreme authority, and that their orders must be implicitly obeyed.

At 2 o'clock the members of the Association, together with many citizens of Montgomery, numbering in all 350, were marched on board of six elegant coaches, gratuitously furnished by the L. & N. Railroad, as a compliment to the occasion, and were soon landed at Jackson's Lake, a beautiful suburban 'Resort' of Montgomery.

Here, a splendid and abundant barbecue was served. In fact, the 'Menu' comprised much more than properly

belongs to a barbecue, constituting what might be justly termed a 'royal feast.'

Full justice was done to savory meats, 'browned to a turn,' to smoking 'Brunswick Stew,' salads, strawberries and cream, *et cet. ad libitum*, all of which were 'freely washed down by fluids, that were certainly delicious to the palate, but the 'chemistry' of which the Secretary did not minutely analyze.

As already stated, the secretary being 'off duty' feels under no official obligation to record what happened thereafter.

He will, however, at considerable risk to his reputation for veracity, venture to whisper that he heard 'Hot Times in the Old Town,' 'Little Brown Jug,' 'Bye Your Baby Bye,' and various other melodies floating about in the air in vigorous, if not altogether harmonious, tones; and that he saw Terpsichorean feats performed in rythm with music artistically evoked from foot, hands, and knee, that would by no means disgrace 'professionals.'

Joke and jollity passed freely around, and being highly contagious, soon a wide-spread epidemic of 'mirth and melody' raged against which 'quarantine' would have been not only unsanitary, but utterly futile.

Thus the afternoon passed, and when the hour for returning to the City arrived all united in pronouncing the occasion an *unbounded success.*

Evening Session.

The Asociation was called to order at 8 P. M. by President LeGrand.

The regular order was continuation of Volunteer Papers.

The first paper read was by Dr. R. M. Pitts, of Montgomery, on Injuries Produced in Modern Warfare.

This paper will be found in the Appendix.

The next paper read was by Dr. E. A. Jones, of Birmingham, on Chronic ~~Intestinal~~ Interstitial Nephritis: Etiology, Pathology and Diagnosis.

This paper was discused by Drs. Cunningham, Goggans and Furniss.

The paper will be found in the Appendix.

The next subject was: An Outbreak of Small-pox at Alabama City, and Its Management. Dr. E. T. Camp, of Gadsden, the author of this paper, being absent, the paper was read by title.

This paper will be found in the Appendix.

Dr. S. W. Welch, of Talladega, next read a paper on Tubercular Joints in Country Practice. This paper was discussed by Dr. G. S. Brown, of Birmingham, and will be found in the Appendix.

Attention was called to the fact that two papers yet to be read, one, by Dr. J. B. Killebrew, of Mobile, the other, by Dr. Seale Harris, of Union Springs, refer to the same subject, and it was moved and adopted that these papers be read in succession, in order that they might be discussed together.

Inasmuch as Dr. Harris's subject is The Causes and Prevention of Puerperal Infection, and Dr. Killebrew's its Treatment, it was further moved and adopted that Dr. Harris's paper be read in advance of Dr. Killebrew's, which was done.

These papers were discused by Drs. Brown, Goggans, Harrison, Cunningham, Watkins, Pitts, and Davis (W. E. B.)

The papers and a part of the discussion thereon, will be found in the Appendix.

A paper on The Diagnosis of Cerebellar Tumors, with Report of a Case and Operation Thereon, was next read by Dr . B. L. Wyman, of Birmingham,.

This paper will be found in the Appendix.

Dr. H. Green, of Bolling, next read a paper on Some Practical Observations upon the Value of Vaccination. This paper was discussed by Drs. Harkness, Wilder, Moon, Wilkinson (D. L.), Blake, and Moody.

This paper and a part of the discussion thereon will be found in the Appendix.

A paper on A Report of Interesting Cases was then read by Dr. J. A. Goggans, of Alexander City. As Dr. Goggans failed to furnish a copy of his paper for publication, it does not appear in the Appendix.

Dr. W. H. Blake, of Wetumpka, next read a paper on The Need of a Separate Prison for Tuberculous Convicts. This paper was discussed by Drs. Moody, Green, and Davis (W. E. B.)

The session was then adjourned.

PROCEEDINGS OF THE FOURTH DAY.

FRIDAY, April 20th.

The Asociation was called to order at 9 A. M. by President LeGrand.

Under the head of Miscellaneous Business, Dr. W. H. Wilder, one of the delegates from the Jefferson County Medical Society submitted the following resolutions, adopted by his Society, with instructions to lay them before this Body:

Resolved, That it is the sense of this Society that the present method of conducting the examinations of applicants to practice medicine in Alabama is inefficient, and that we strongly urge that this society should instruct its representatives to the next meeting of the State Medical Association to bring this question before the Association and advise legislation that would correct existing inefficiency in the law.

It is further resolved, That it is the sense of this society that no member of an examining board should be in any way connected with a medical school.

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It is further resolved, That it is the sense of this society that no member of an examining board should be in any way connected with a medical school.

Dr. H. A. Moody, of Bailey Springs, moved that the resolution be referred to the Board of Censors, with the request that a report thereon be submitted at this meeting of the Association. The motion was adopted and the resolutions were so referred.

It was then moved that Dr. H. A. Moody be permitted to read his paper on Chronic Malarial Poisoning, he having overcome the difficulties of travel and reached the meeting. The motion was adopted, whereupon Dr. Moody proceeded to read his paper, which was discussed by Dr. G. C. Chapman, of Birmingham.

The paper will be found in the Appendix.

Dr. E. H. Sholl, of Birmingham, submitted the following resolutions, which were unanimously adopted:

As this most delightful and successful meeting of The Medical Association of the State of Alabama is now drawing to a close, it is fit that the sincere appreciation of what has been done to promote this end, should find expression in appropriate and genuine words, therefore,

I—*Resolved*, That the most cordial thanks of this Association are hereby tendered to the Montgomery County Medical Society for the elegance and completeness of the arrangements made for conducting the business of the Association, and, also, for the social entertainments provided, especially the elegant 'Reception' given at the rooms of the Commercial and Industrial Association, and the splendid and lavishly abundant 'Barbecue' given at Jackson's Lake, an occasion unsurpassed in social and sumptuous features.

II—*Resolved*, That the magnificent vocal and instrumental music, the echoes of which will long linger with us, rendered on the evening of the oration and the address of the Monitor places this Association under the most pleasant obligations to the accomplished amateurs and professionals who so artistically entertained us on that occasion.

III—*Resolved*, That the thanks of this Association are due and are hereby tendered to the railroad companies of the State for transporting the members to this meeting at reduced rates, and especially to the L. & N. Railway Company for the additional and most highly appreciated courtesy of a complimentary train to convey the members to and from Jackson's Lake on the occasion of the entertainment given there.

IV—*Resolved*, That to the press of the city we are indebted for liberal and extended reports of our proceedings, and to many of the citizens for courteous attentions and hospitalities.

V—*Resolved*, That copies of these resolutions be offered to the papers of the city for publication.

The Board of Censors then presented its annual Report as follows:

THE TWENTY-SEVENTH ANNUAL REPORT OF THE BOARD OF CENSORS, INCLUDING REPORTS OF THE STATE BOARD OF MEDICAL EXAMINERS AND COMMITTEE OF PUBLIC HEALTH.

In submitting this, the Twenty-seventh Annual Report of the State Board of Censors, an effort will be made to present, as briefly as possible, such subjects as are entitled to consideration.

THE PRESIDENT'S MESSAGE.

With the appeal the president makes to the non-affiliating doctors throughout the State to unite with their respective county societies, and thereby identify themselves with this Association; and with the views he expresses as to the wisdom and importance of upholding and solidifying the county societies as the foundation stones upon which the superstructure of this Association rests, we are in entire sympathy, and commend both the appeal and the views expressed to the thoughtful consideration of every doctor in the State.

The President's recommendation that the effort to secure the enactment of a law of compulsory vaccination be renewed at the next session of the General Assembly meets with our entire approval.

What the President says in regard to the collection of vital and mortuary statistics should arrest the attention of every doctor in the State, and we hope will have a wholesome effect in stimulating them to the discharge of this important legal obligation.

The President recommends that typhoid fever be added to the list of infectious diseases, and that physicians be required to report to their respective health of-

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Dr. E. H. Sholl, of Birmingham, submitted the following resolutions, which were unanimously adopted:

As this most delightful and successful meeting of The Medical Association of the State of Alabama is now drawing to a close, it is fit that the sincere appreciation of what has been done to promote this end, should find expression in appropriate and genuine words, therefore,

I—*Resolved*, That the most cordial thanks of this Association are hereby tendered to the Montgomery County Medical Society for the elegance and completeness of the arrangements made for conducting the business of the Association, and, also, for the social entertainments provided, especially the elegant 'Reception' given at the rooms of the Commercial and Industrial Association, and the splendid and lavishly abundant 'Barbecue' given at Jackson's Lake, an occasion unsurpassed in social and sumptuous features.

II—*Resolved*, That the magnificent vocal and instrumental music, the echoes of which will long linger with us, rendered on the evening of the oration and the address of the Monitor places this Association under the most pleasant obligations to the accomplished amateurs and professionals who so artistically entertained us on that occasion.

III—*Resolved*, That the thanks of this Association are due and are hereby tendered to the railroad companies of the State for transporting the members to this meeting at reduced rates, and especially to the L. & N. Railway Company for the additional and most highly appreciated courtesy of a complimentary train to convey the members to and from Jackson's Lake on the occasion of the entertainment given there.

IV—*Resolved*, That to the press of the city we are indebted for liberal and extended reports of our proceedings, and to many of the citizens for courteous attentions and hospitalities.

V—*Resolved*, That copies of these resolutions be offered to the papers of the city for publication.

The Board of Censors then presented its annual Report as follows:

THE TWENTY-SEVENTH ANNUAL REPORT OF THE BOARD OF CENSORS, INCLUDING REPORTS OF THE STATE BOARD OF MEDICAL EXAMINERS AND COMMITTEE OF PUBLIC HEALTH.

In submitting this, the Twenty-seventh Annual Report of the State Board of Censors, an effort will be made to present, as briefly as possible, such subjects as are entitled to consideration.

THE PRESIDENT'S MESSAGE.

With the appeal the president makes to the non-affiliating doctors throughout the State to unite with their respective county societies, and thereby identify themselves with this Association; and with the views he expresses as to the wisdom and importance of upholding and solidifying the county societies as the foundation stones upon which the superstructure of this Association rests, we are in entire sympathy, and commend both the appeal and the views expressed to the thoughtful consideration of every doctor in the State.

The President's recommendation that the effort to secure the enactment of a law of compulsory vaccination be renewed at the next session of the General Assembly meets with our entire approval.

What the President says in regard to the collection of vital and mortuary statistics should arrest the attention of every doctor in the State, and we hope will have a wholesome effect in stimulating them to the discharge of this important legal obligation.

The President recommends that typhoid fever be added to the list of infectious diseases, and that physicians be required to report to their respective health of-

ficers all cases of that disease, with the idea that investigations might be made as to the origin of the disease and steps taken to abate the cause.

We have maturely considered this recommendation and very readily see the merit and force it has. We fear, however, that our public health machinery is not yet quite strong enough to admit of the addition of this disease to those already required to be reported. Taking this view, we feel that the better course would be to place the President's recommendation on this subject on file for future consideration and action, to be taken up at such time as may seem auspicious for carrying it to a successful termination. We advise, therefore, that the recommendation in question be not endorsed at present, but, as already said, that it be reserved for future consideration, whenever the time seems favorable for adopting it.

With the sentiments the President expresses in behalf of the cause of temperance the Board is in full accord, but when the question of how to prevent the abuse of intoxicating liquors is considered many difficulties arise. The proposition for the establishment by the State of a sanitarium or reformatory for inebriates opens a wide field for discussion, too wide for an occasion like this, therefore, we feel compelled to leave this suggestion without expressing at this time any final conclusion thereon.

We desire, however, to endorse the President's request that the members of this Association shall devote close study to the subject of intemperance, and endeavor to evolve the best possible measures for its prevention.

In the light of the most recent teaching, the President discusses the wisdom of separating, as far as possible, tuberculous from non-tuberculous persons, and recommends that an effort be made to have this done in the State prisons of Alabama.

We endorse this recommendation, and, as suggested by the President, advise that this Board be authorized to bring the matter to the attention of the Governor and the Board of Convict Commissioners.

The plea the president makes for epileptics unquestionably possesses merit, but we are of the opinion that it is premature to ask the State to provide a 'Colony' for this class of persons, in the face of the fact that there are other and perhaps more urgent demands for sanitary legislation. In refusing to endorse the President's recommendation that the matter of providing for epileptics be brought to the attention of the next General Assembly, we suggest that it be kept in view as an appropriate subject for legislation at the earliest auspicious time.

The position the President takes on the subject of "Vivisection" meets our hearty approval, and, in accordance with his recommendation, we advise that this Board be authorized to address letters embodying sound views on this subject to the Senators and Representatives in Congress from this State.

The President next discusses the subject of "Contract Practice," and very properly calls attention to the importance of maturely considering it. The Board will present an ordinance on this subject in another part of this Report, and in that connection will give the matter further consideration.

The President's message closes by a fervid appeal in behalf of a cause that should enlist the genuine sympathy and generous aid of every member of this Association, namely, the erection of a monument to Jerome Cochran. This Board avails itself of this opportunity for declaring that its desire to see an appropriate monument erected has not, in the least, diminished, and it

hopes that every member of this Association warmly participates in this feeling.

The President's recommendation that $1,000.00 be appropriated out of the funds of the Association toward the erection of the proposed monument is one the adoption of which would do great credit to this Association, but we find that Article 62 of the Constitution seems to forbid any appropriation of the funds of the Association, except such as may look directly to the advancement of medicine. However much we would like to follow the dictates of our hearts in this matter, we feel compelled to obey the Constitution, therefore, must decline to approve this recommendation of the President.

REPORTS OF THE VICE-PRESIDENTS.

We are glad to be able to state that the reports of the vice-presidents give evidence of much work on their part, and of an effort to promote the organization of the county societies in their respective divisions to the highest degree of efficiency. These officers have unquestionably labored faithfully and are entitled to the cordial and grateful thanks of this Association. We would especially commend the form in which the junior vice-president (Dr. Gay) has presented his report. By grouping the counties in his division he was able to furnish a comprehensive and sufficiently detailed report of their condition, and at the same time to condense his report to narrower limits than it would have occupied had he adhered to the usual plan of taking up each county in detail and commenting upon it separately.

THE REPORT OF THE SECRETARY AND THE BOOK OF THE ROLLS.

The report of the Secretary presents a very satisfactory account of the work that has passed through his office during the year, and gives evidence of faithful and attentive service on his part.

The Book of the Rolls is not written up as completely as it might be, but that is not the fault of the Secretary. Until the members furnish the necessary data for filling up this book, it is obviously impossible for the Secretary to fill it.

THE REPORT OF THE COMMITTEE OF PUBLICATION.

The report of the Committee of Publication furnishes adequate information of its work for the year. The report assigns the various causes for delay in the publication and distribution of the last volume of the Transactions. With the exception of this delay, much of which was unavoidable, the work of this Committee seems to have been satisfactory.

THE REPORT OF THE TREASURER AND THE BOOK OF ACCOUNTS.

We find the accounts of the Treasurer correct and his books neatly and systematically kept. We recommend that the work of this office for the year be approved.

THE ACCOUNTS OF THE STATE HEALTH OFFICER.

The accounts of the State Health Officer were found correct, and we recommend that they be approved.

REVISION OF THE MINUTES OF 1899.

No material errors occur in the minutes of the last meeting. The few that do exist are typographical and unimportant, and, therefore, it is unnecessary to point them out in detail.

DELINQUENT COUNTY SOCIETIES.

At the last meeting of the Association the following named counties were delinquent in all of their constitutional obligations to this Association, that is, as to delegates, dues, and report: Chambers, Covington, Greene, Macon, Russell, and Wilcox.

Letters have been written to the presidents, secretaries, and other members, of these several societies urging them to comply at this meeting with all of their obligations to the Association, and we are glad to find that Macon and Russell counties have done so, and that Chambers county has sent in a report and paid dues.

In this connection, we desire to state that immediately after adjournment of the Association last year Macon county complied with all of her constitutional obligations,—hence she was merely technically delinquent at that meeting.

LEGISLATION.

We recommend that this Board be authorized to submit to the next General Assembly a memorial on public health matters, setting forth in broad and strong terms the influence which should be accorded to this body on all questions pertaining to sanitary legislation. We deem it not an immodest or unwarrantable claim that the voice of this Association in behalf of any sanitary measure should be accepted by the law-makers of the State as proceeding from the highest authority that can speak on a subject of that character, and, therefore, entitled to consideration commensurate with such source.

As special subjects in need either of original legislation, or amendments to existing legislation, we submit the following:

1. Amendments to the general quarantine law.
2. Adequate salaries for county health officers.
3. Suppression of small-pox and other infectious diseases, including compulsory vaccination.
4. Provision for prompt and regular reports of certain infectious diseases.
5. Clearer statement of the penal section of the law to regulate the practice of medicine.
6. Transportation of dead bodies.
7. Inspection of all places in which food is offered for sale, or for consumption by the public.
8. Release of practicing physicians from jury and road duty.
9. Increase of the appropriation to carry into execution the health laws of the State.

We recommend that this Board be authorized to prepare in advance of the next meeting of the General Assembly bills covering the above subjects and endeavor to have them enacted into laws.

NEW EDITION OF THE BOOK OF THE RULES.

Authority was given two or three years ago for the preparation and publication of a new edition of the Book of the Rules.

Various circumstances, not necessary now to mention, have contributed to render it impossible to edit the edition. Inasmuch as it is hoped that new legislation will be obtained from our next General Assembly, which legislation should be embodied in the new edition in order to keep it fully up to date, we recommend postponement of the issuance of the new edition until our next meeting.

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NEW CHARTERS.

The issuance of new charters for all of the county societies was provided for at the meeting held in Selma, 1897. It was contemplated to have these charters printed on parchment, or parchment paper, and gotten up in official and good style. Owing to the form of the charter a difficulty arose in regard to the printing, that is, it was ascertained that a blank space had to be left in the body of the charter in which the names of the members of the several county societies might be entered.

As the membership in the county societies varies from six to one hundred, or more, it was evident that a uniform space would not properly fit all societies, that is, the space in which one hundred names could be entered would be too large for the entrance of a comparatively small number of names. This difficulty was finally overcome by the thought of having three sizes of charters printed, the difference in size applying to the vacant space left for entering the names of the members. Those charters with the largest space would be used for the societies having the largest membership; those having a medium space, for the societies having an average membership; and those having the smallest space, for the societies having the smallest membership.

Since this plan of getting over the difficulty was devised, other and such urgent duties have devolved upon this Board that it has not been practicable up to this time to have the charters prepared. So far as can now be seen, it will be practicable to do this very soon. We recommend, therefore, that the authority to issue new charters be continued.

AMENDMENT TO THE CONSTITUTION.

At the last meeting of the Association an amendment to Article 48 of the Constitution was prepared and read to the Association, Article 48 to be stricken out and substituted by the proposed amendment, which here follows:

He shall give bond for the faithful performance of his duty, said bond to be secured by an indemnity company, selected or approved by the Board of Censors of this Association. The amount of the bond shall be fixed by the Board of Censors at about double the sum of money belonging to this Association likely to be in the Treasurer's hands at any one time, and said bond shall be certified and recorded in accordance with the laws of Alabama. All funds and securities of the Association shall be placed in such banks or depositories as may be, from time to time, designated by the Board of Censors, and shall be drawn out only on orders countersigned by the President and Senior Censor of the Association.

All expense incurred in furnishing the bond shall be defrayed by the Association.

It being now in order, we recommend the adoption of the amendment just read.

CONTRACT PRACTICE—NEW ORDINANCE.

In recent years the tendency among physicians to make contracts to do practice at stipulated sums has been growing. Recognizing this fact, the Association, at the Birmingham session of 1890, considered the question, and as the outcome of such consideration adopted an ordinance legalizing certain kinds of contract practice. It seems necessary that the subject be reconsidered, and that definite action be taken thereon.

To do practice by contract at all unquestionably detracts from the dignity that ought to belong to a learned profession, and tends to degrade such profession to the level of a trade. This tendency is bad, both for the people and the profession. Were it permitted to go on unchecked and unguarded by definite ethical law, very soon the practice of medicine would pass into the hands of men utterly destitute of those lofty endowments both of mind and heart, without which no man can be a broadly competent and ideal practitioner. In other words, should it become the rule, instead of the exception, to do practice by contract, the standard of capacity and skill among the members of the profession would become markedly lowered, and an inferior class of men would seek this field of labor as they would any trade or calling.

Such a result would be fatal, not only to the dignity of the profession, but frequently to the lives of the people. Let us resolve to stand firmly by the letter of any law on this subject we may make, and to punish any violator thereof by denying him all professional recognition.

The only justification for departing at all from the high ethical standard that formerly prevailed on this subject lies in the changed social conditions and the immense industrial developments that have taken place in our country.

Adapting ourselves to these new conditions, as far as appears legitimate and proper, we submit the following ordinance and propose that it be substituted for the one already referred to as having been adopted in 1890:

Be it ordained by the Medical Association of the State of Alabama, That an ordinance adopted by the Association on April 12, 1890, and found on page 78 of the volume of Transactions of that

year, be so amended as to read as follows, and that the amended ordinance shall take the place of paragraph three (3) of the ethical ordinances of the Association, which paragraph is found on page 222 of the Book of Rules:

He may practice for a stated salary for the unofficial employes of any railroad corporation so far as accidents and injuries received in the service of such corporations are concerned, without including in such contract the salaried officials of such corporations; for the laborers of mining companies and manufacturing establishments and their families, but not for the salaried officials and managers of such companies and establishments, or for their families; for the pupils attending educational institutions removed from their homes, without including in such contract the presidents, professors, or teachers of such institutions, or their families; for the inmates of poor houses, charity hospitals, jails, and prisons, without including in such contract the salaried officials and managers thereof, or their families; for the hired laborers or tenants on plantations and for their families, without including in such contract the owners or managers of such plantations, or their families; for the sailors or crews of ships or boats, without including in such contract the captain, master, clerks, or other officers thereof, or their families.

It shall be unethical to make a contract to do practice on terms other than those herein prescribed.

It is recommended that the fees for such contract practice as is herein provided for shall be fixed by the profession of the town or locality where such practice is done, and that said fees shall constitute a part of the regular and accepted fee bill in use among the reputable physicians of such town or locality.

It is further recommended that the several county societies shall enforce this ordinance, in so far as the members of their respective societies are concerned, in such way as they may deem fit. It is further recommended that any physician, not being a member of a county society, who violates this ordinance shall be dealt with as the general profession of the locality that fixes the fee bill of such locality may decide.

OUTBREAKS OF INFECTIOUS DISEASES IN A COUNTY.

When an infectious disease makes its appearance in a county the method of procedure under our public health system is perfectly definite and clear. To diagnose the disease is the first duty. If any doubt on this point should arise in the mind of the attending physician he

should immediately call in consultation some one of his colleagues, or should notify the chairman of the committee of public health for the county, or the county health officer. Either of the two last named should, when notified, respond promptly and render such assistance as he may in solving the doubt. If an agreement as to diagnosis is not quickly and satisfactorily reached a meeting of the committee of public health for the county should be called, whose judgment ought to be satisfactory and final. Should the opinion of the committee be divided, the State Health Officer should be summoned to assist in the investigation. Should the case or cases that have undergone investigation prove to be infectious in nature, the committee of public health should hold a strictly official meeting, with the county health officer present, and should determine upon the measures to be instituted in order to prevent the spread of the disease.

If the situation is urgent, these measures should be immediately put into operation under the supervision of the county health officer as the executive officer of the committee. The committee should promptly send written notice to the probate judge and commissioners of the presence and extent of prevalence of the infectious disease, and should accompany this notice with written recommendations as to the measures needed to prevent the spread of the disease. If possible, they should furnish the county authorities with some estimate of the probable expense that will be incurred. It then devolves upon the county authorities to either make an appropriation of a certain sum of money, or to indicate their willingness to assume all liabilities for such expense as may be incurred. When the means of combating the outbreak have been guaranteed by the county

authorities, the committee of public health should give the county health officer instructions as to the measures to be employed, and the latter officer should see that these measures are promptly carried into execution. The committee should meet as frequently as is necessary in order to keep fully informed as to the situation, and to give such new instructions to the county health officer as varying circumstances may demand.

Notification of the outbreak should be promptly sent to the State Health Officer, with full information as to the nature of the disease, the number of cases, the measures instituted, etc., and the State health office should be kept informed daily, or in some cases less frequently might answer, as to the further progress of events.

Where the outbreak occurs in an incorporated city or town the notification should be sent to the municipal authorities of such town or city, instead of the county authorities, unless the town is too small to possess any separate or independent health machinery.

There is one subject germaine to the one now under discussion to which we desire to ask special attention. It is the regulation of remuneration to be paid to physicians for services rendered in the control of an outbreak of infectious disease. Friction has occurred just here in several counties of the State. No definite agreement as to remuneration to be paid physicians was made in advance, and after the service had been rendered a considerable difference of opinion arose betwixt the physicians who did the service and the county or town authorities as to the amount that should be justly paid. A situation of this sort should never be permitted to occur. An agreement upon the amount of remuneration to be paid should always be made in advance, and thus no room left for disagreeable contentions to arise, which

sometimes become bitter and do our public health system great harm.

One of the underlying principles of our public health system is economy in the expenditure of the peoples' resources. The author of the system profoundly appreciated how essential is this principle to the perpetuity of the system, and never failed on all proper occasions to emphasize the importance of rigidly and tenaciously adhering to this principle. Doctors should be remunerated for their services in suppressing epidemics, and the nature of the service and the exposure which it involves should be taken into consideration in fixing the amount to be paid them, but they should never expect or demand excessive remuneration. They are expected to fight disease as soldiers fight foemen, but as the pay of the latter is generally the same in war as in peace, so, the former should disdain to demand exorbitant pay because they have been exposed to infectious disease.

In order to provide against the misunderstandings referred to we submit the following ordinance:

Be it ordained by the Medical Association of the State of Alabama, That whenever an outbreak of contagious or infectious disease occurs in a county or in an incorporated city or town that in the judgment of the committee of public health for the county requires to be controlled under the public health laws of the State, it shall be the duty of the committee of public health of the county wherein the outbreak occurs to confer with the county, city, or town authorities, as the case may be, and agree upon the compensation to be paid for such medical services as may be needed to suppress the outbreak.

We recommend the adoption of this ordinance, for, it is far easier to prevent disputes than to heal them after they have occurred.

In this connection we regret the necessity of announcing and emphasizing a principle which

should dominate the heart and direct the life of every true physician. We mean a firm resolve to meet with intrepid fidelity every danger that can confront him in his professional career. Courage, although of a somewhat different kind, may be demanded of a physician to the same, or even a greater, extent than from a soldier. If cowardice is disgraceful on the field of battle, it is equally or more so on the field of professional exposure to disease. People have the right to expect their armies to defend them against invasion by armed foes, they equally have the right to expect their physicians to defend them against invasion by disease.

The soldier who deserts his colors in the face of the enemy is by all military law condemned to death and the justice of his fate is applauded by his own fellow soldiers. The physician who deserts his colors in the face of disease should be doomed by his colleagues, and by the people, to even a worse fate than that of the soldier—to live in disgrace, a living death.

We have been prompted to express these views by having heard of physicians who have declined to respond to calls for their professional aid when to obey such calls would expose them to the danger of contracting disease. Such infidelity to duty is dishonorable to any member of the profession, but even more conspicuously so to one who occupies an official position in the execution of sanitary laws. We announce the proposition that when a pestilential disease, be it what it may, makes its appearance in a community any physician called upon to attend the patient should be too proud, too brave, and too true to duty, to refuse response to the call. More, any health official when called upon to investigate the nature of such disease should obey the call, though he knew that his own death would pay the price of obedience to duty.

When a pestilential disease is prevailing in a community it may often be best and wisest for some one or more physicians to be set apart, as it were, to take charge of such outbreak and to devote their entire time to its management, but an arrangement of this kind, however justifiable from a practical standpoint, should not weaken in the least the strength or justice of the sentiment already expressed.

EXAMINATION FOR LICENSE TO PRACTICE MUST BE MADE IN ENGLISH.

Applications have been made by foreigners to some of the examining boards in the State for examination in their native language, or in some other language than English. In one or two instances these applications have been granted, and in at least one instance unfortunately granted, as subsequent developments proved.

For obvious reasons, it is clear that all examinations should be held in the English language, for, if an applicant is not sufficiently familiar with the English language to undergo his examination in that language, he is not competent to communicate his directions to patients in the English language. It is no answer to assert that his practice will be among foreigners. It may also be among English-speaking people.

Besides all that, English is our national tongue, and when foreigners come to live with us we should require that they qualify themselves to transact business in the language of their adopted country.

To set this matter at rest we propose the following amendment to an existing ordinance:

Be it ordained by the Medical Association of the State of Alabama, That paragraph one (1) of an ordinance (See p. 94, Book of the Rules) prescribing rules for conducting examinations for license to practice medicine in this State be amended by inserting after the words "written examination" in the third line of said paragraph, the following words: which examination shall be conducted in the English language.

PRACTICE BY UNDER-GRADUATES.

The disposition on the part of under-graduates to engage in practice during the intervals of attendance upon their college sessions is a growing evil, and should be effectually checked. At the meeting of this Association, held in Anniston in 1886, this question was considered, and a "deliverance" thereon was made, which can be found in the volume of Transactions of that year, page 136.

Deeming it unnecessary to quote in full what was then said, we beg to summarize the spirit of it as follows:

1. No under-graduate should be permitted to do practice on his own responsibility and at an independent location.

2. Any practice which an under-graduate may do should be done under the direct supervision of a preceptor, or licensed physician, to whom he must be understood as occupying the position of an assistant.

3. Any patients an under-graduate is permitted to visit must be the patients of the preceptor, or licensed physician, and not his own.

We call upon the physicians throughout the State to use their influence to arrest the growing evil of under-graduates entering upon practice prematurely, and which we have reason to believe is taking deep root in some places. Unless checked it will inevitably unsettle, more or less, our law regulating practice, a great reform-

ing measure which has already markedly elevated the standard of competency of the profession throughout the State, and if rigidly enforced is destined in the end to put that standard upon a very high plane. The short statement just given of the principles which should govern in this matter will serve as a correct guide for all persons interested.

SHALL NEWLY ELECTED COUNSELLORS BE PERMITTED TO VOTE?

The question as to the right of newly elected counsellors, not being delegates, to vote, has come up for practical settlement on a good many occasions, that is, just when elections were being held. A time like this is not a very appropriate one for the settlement of a question of this character, therefore, we have thought it worth while to bring the matter up for final settlement.

Without going into any elaborate statement of reasons therefor, we are of the opinion that newly elected counsellors should not be permitted to vote as counsellors. They have not formally accepted the position to which they have just been elected; they have not signed the counsellor's pledge; and they are not yet supplied with a badge that carries with it the title to vote.

For these reasons and others, not here stated, we recommend that they be not permitted to vote until they have qualified themselves by formally accepting the position to which they have been elected, paying their dues, and signing the counsellors' pledge.

THE RESOLUTIONS OF THE JEFFERSON COUNTY MEDICAL SOCIETY.

Two resolutions adopted by the Jefferson County Medical Society and submitted to this Association were referred to the Board of Censors for investigation and report.

The resolutions read as follows:

Resolved, That it is the sense of this Society that the present method of conducting the examinations of applicants to practice medicine in Alabama is inefficient, and that we strongly urge that this society should instruct its representatives to the next meeting of the State Medical Association to bring this question before the Association and advise legislation that would correct existing inefficiency in the law.

It is further resolved, That it is the sense of this society that no member of an examining board should be in any way connected with a medical school.

In considering the resolutions just read, we find that the first one embodies two ideas or propositions: One, that the present method of conducting the examinations of applicants to practice medicine in Alabama is inefficient; the other, that the law itself is inefficient, that is to say, the first proposition pronounces the method of enforcing the law in Alabama inefficient, and the second pronounces the law itself inefficient. It is not clear upon which of these propositions the resolution embodies instructions to the delegates of the Jefferson County Medical Society to advise legislation, or whether it means to affirm that both the law itself and the method of enforcing it are inefficient. Being in doubt, therefore, as to the exact construction to be placed upon the resolution, we will discuss it from the three possible constructions of which it is susceptible.

If the alleged inefficiency lies wholly in the method of conducting the examinations, that defect is susceptible of amendment by this Association, without invoking any legislation whatever from the law-making power.

We quote section 3262 from the Code as follows:

The standard of qualification, the method or system, and the subjects of examination of practitioners of medicine, shall be prescribed by the Medical Association of the State of Alabama, and must be observed by the Boards of Medical Examiners.

It will be seen from the section of the law just quoted that the right to prescribe the method of conducting examinations belongs to this Association. That method has been very minutely and carefully prescribed and can be found under "The Code of Ordinances for the Government of the Boards of Medical Examiners" in the Book of the Rules, pp. 85-97, inclusive.

We submit that the method there laid down covers every detail, and is thorough and exhaustive.

We might support the proposition just stated, as to the efficiency of the method of conducting examniations prescribed by this Association, by pointing to the examinations held by the Jefferson County Board of Examiners, a board created by, and the agent of, the society from which the resolutions under discussion emanate.

Are not the examinations of that board efficient? The examination papers which it sends up to the State Board bear every evidence of thoroughness and efficiency. The same claim can be made for the papers sent up by many other boards in the State. If any county society has reason to believe that its board of examiners is not doing efficient and honest work, the remedy lies in its own hands; it can impeach such board and provide itself with another.

We feel compelled, therefore, to take issue with the broad proposition stated in the first resolution, namely, "that the present method of conducting the examinations of applicants to practice medicine in Alabama is inefficient," and in justification of our view will submit as evidence the examination papers furnished by the Jefferson County Board of Examiners and by many other boards in the State. We insist, therefore, that the first proposition in the resolution under discus-

sion is neither just nor tenable, in the broad and unqualified way in which it is stated.

We come now to the discussion of the second proposition contained in the first resolution, namely, the one which seems to attribute inefficiency to the law itself, that is, it makes a general charge of inefficiency without furnishing any specifications of wherein the inefficiency lies. Until such specifications are furnished it is impossible to discuss the propriety of changing the law.

Without definite information as to what change is proposed the question of change does not admit of intelligent discussion. We feel compelled, therefore, to decline any further consideration of the second proposition contained in the first resolution.

Had the resolution affirmed that the present method of conducting the examinations of applicants to practice medicine in *some* of the counties in Alabama is inefficient, we might have stood ready to accept and endorse such proposition, but the statement included the entire State. Grant that the method of conducting examinations in some of the counties of the State is not as efficient as it might be, may not that defect be corrected? Unquestionably. The records show great improvements in the work of the examining boards as a whole, and, judging the future by the past, the time is not distant when it will attain a reasonable degree of efficiency in every county of the State.

Medical education is improving. The colleges are turning out better and better men, and the time will come when an applicant with inadequate knowledge will fail to obtain license from any board of examiners in the State. We believe that the maintenance of the county boards of examiners fulfills and will continue to fulfill useful and wise purposes other than that of ex-

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amining applicants for license to practice medicine, however important that function is conceded to be. What these other purposes are time does not permit us now to state.

We recommend, therefore, that the first of the two resolutions submitted by the Jefferson County Medical Society be not endorsed by this Association.

The second resolution expresses the sentiment that no member of an examining board should be in any way connected with a medical school.

The objection seems to be applied to all boards, that is, to the State Board, as well as to county boards.

Inasmuch as the examinations held by the State Board are wholly impersonal, it would seem that no good and valid objection could be alleged against a person who happens to be connected with a medical school holding membership on that board. By examinations being impersonal we mean that the members of the State Board, when rating examination papers submitted to them, are entirely ignorant of the name, color, sex, college of graduation, or medical sect of the applicant. This being the case, it is difficult to see how a member of the State Board could favor a graduate of the college with which he might happen to be connected.

Under this state of facts we have no hesitation in pronouncing the objection in the resolution, in so far as it applies to the State Board of Examiners, as not being well founded. To disqualify a man, without good reason, for service on that Board would, in our opinion, be unjust, and unworthy of an Association that has always prided itself upon conducting its business affairs upon lofty and just principles. The same State Board that examines applicants for license to practice must administer the public health and quarantine laws of the State,

must sit as a medical court for the adjudication of all ethical questions that may come before it,—hence its members should be selected with reference to their fitness for these important and responsible duties, regardless of whether or not they may hold college positions.

We recommend that the position here taken be affirmed by this Association.

Service as a member of a county board of examiners stands in a somewhat different attitude from that of service on the State Board. The members of county boards may know, and generally do know, the identity of an applicant, and the college at which he graduated. Whilst we would be slow to admit that any member of a county board would violate official fidelity by favoring an applicant who happened to be a graduate of the college with which he held official connection, yet it is sometimes a good rule to avoid even the appearance of evil.

To do this, and to do it far more broadly than the resolution suggests, we submit the following ordinance:

Be it ordained by the Medical Association of the State of Alabama, That any member of a county board of examiners who may be officially connected with the college of which any applicant who may appear before the board for examination is a graduate, or who is related by blood or marriage to such applicant, shall be disqualified from participating in the examination of such applicant.

The place of such member of the board for such examination shall be temporarily supplied by the remaining members of the board from among the reputable and qualified members of the society of which such board is the creature.

MARITIME QUARANTINE.

No sanitary subject possesses more importance for the people of the Gulf States than that of the means of protection against the importation of yellow fever. During the past three summers this disease has pre-

vailed in some of the Gulf States, and has terrorized the people, and disastrously disturbed their commerce. It is of the highest moment, therefore, that we carefully consider and adopt the best means of avoiding similar disasters in the future.

Believing that yellow fever is an exotic disease, and that it cannot reach our shores except by being brought in ships that sail from infected ports, the subject of maritime quarantine assumes most vital and absorbing interest.

Our safety depends upon the measures enforced against such ships, as they approach or land at our sea ports.

Formerly, what is called "the close quarantine season" began on the first of May, and continued until October or November following, depending upon the earlier or later approach of frost.

The experiences of the past three years with outbreaks of yellow fever, together with the largely increased and rapid communications betwixt this country and Cuba and other yellow fever-breeding places, have rendered it wise to advance by one month the "close quarantine" season, which has been done for the past two years by most of the Gulf ports.

New Orleans is an exception, that is to say, she persists in keeping her communications with yellow fever infected places open during the month of April, or, at all events, imposes much lighter restrictions upon persons coming from infected places than do some of the other Gulf ports.

We do not hesitate to say that no place in the South furnishes a more favorable nidus for the propagation of yellow fever than does New Orleans when the infection has been planted there, hence it would seem that for her

own protection she would exercise great vigilance and care.

So rapid and extensive are the communications betwixt New Orleans and the remainder of the South that the safety of the latter depends largely upon the safety of the former.

Entertaining these feelings, the State Health Officer recently addressed the following communication to Dr. Edmond Souchon, President of the Louisiana State Board of Health:

OFFICE OF THE STATE BOARD OF HEALTH,
MONTGOMERY, ALA., April 4, 1900.

Dr. Edmond Souchon, President Lauisiana State Board of Health.

DEAR DOCTOR:—I have carefully read a copy of the "Quarantine Proclamation," for the year 1900, "Published by the Louisiana State Board of Health," and find myself in some doubt as to the proper construction to be placed upon some of the rules therein contained, and compelled to take issue with some others of them. I quote from the rules as follows:

"Vessels of the third class without passengers to be subjected to full sanitation at the Mississippi River Quarantine Station, without detention of either vessels or persons after disinfection, until May 1st, 1900, on and after which date vessels of this class shall be detained for observation, together with their crews, cargoes, and passengers, for such length of time after completion of disinfection as the Board of Health may determine."

To whom does the word "persons" in the above quotation refer? May it not embrace both passengers and crews? If intended to be restricted to crews, why distinguish between passengers and crews as possible carriers of the infection of yellow fever? Further, why subject a vessel coming from an infected port to "full sanitation," and permit the persons thereon to pass without detention?

You must admit tnat persons far oftener than things become carriers of the infection of yellow fever, yet, according to your rules, you destroy the infection on the deck or in the hold of a ship, and permit that that may be incubating in the bodies of persons to pass undetained, perhaps, to become the focus of an epidemic.

I quote again:

"Vessels of the third class with passengers to be subjected to full sanitation with detention thereafter for such length of time as the Board of Health may determine."

If this provision went into effect on the first day of this month (I am not entirely clear on this point) why make a distinction during the month of April in the precautions enforced against *passengers* and *crews* coming from an infected port?

Two vessels, one with passengers on board, the other without, may sail on any given date during this month from Havana, for instance, yet, according to your rules, the former would be detained after "full sanitation" of the vessel, whilst the latter would not be.

If any reason for this distinction can be assigned I would be pleased to hear it. Again, I beg to enter my protest against the period of detention (five days) fixed by your Board, and also by other boards.

Doubtless, it covers the period of incubation of yellow fever in many cases, but I do not believe it covers it in all. The interests at stake are such that the risks should be reduced to a minimum. What comparison is there betwixt the loss sustained by the addition of a few days to the detention of ships coming from infected ports and that which an epidemic of yellow fever in the South would entail? Absolutely none.

In the face of the fact that yellow fever is now prevailing in some of the ports where it is endemic there must be great danger to our Gulf Coast cities in keeping up, at this season, communication with such ports, except under proper restrictions.

I need not remind you that yellow fever was imported into the country in April, 1897, and that it passed through your Quarantine Station. If imported in April of that year, why may it not be imported in April of this, or any other year, especially, taking into consideration the proximity of Cuban ports (where the disease is now prevailing) and the rapid and frequent communications going on with those ports?

Last year I communicated with you on this same subject, and desire to place myself on record again as expressing the opinion that your quarantine restrictions, especially for the month of April, are inadequate for the protection of your own State, and, therefore, dangerous to Alabama. Nothing would afford me greater pleasure than for New Orleans to escape an epidemic of yellow fever the coming summer, but her escape can only come through the administration of an efficient maritime quarantine.

I beg to assure you that I have written as I feel, candidly and without reserve. Although Alabama has succeeded for the past two summers in protecting herself from invasion, I sincerely hope there will be no occasion for her to repeat the effort the coming summer.

With kind personal regards,

Very truly yours,

W. H. SANDERS,
State Health Officer.

A brief answer to this communication was made by Dr. Souchon, in which he took issue with the statement that yellow fever was imported into the country in 1897 through the Quarantine Station of New Orleans, and in which he also gave notice that a more extended reply would be made later on.

The Board of Censors, agreeing with the arguments advanced by the State Health Officer in the communication quoted above, and with the conclusions to which they point, beg to submit the following resolutions, as expressing the views of the Board on this important subject:

1. *Be it Resolved,* That as maritime quarantine is the only available safe-guard against the introduction of yellow fever into this country, this Board is of the opinion that such quarantine should be annually instituted sufficiently early in the season, and conducted upon principles and rules sufficiently scientific and correct, as beyond all doubt to prevent the importation of the disease.

2. *Be it further Resolved,* That having examined the rules for maritime quarantine recently promulgated by the Louisiana State Board of Health, and comparing said rules with similar ones proclaimed by other Gulf Coast authorities having charge of maritime quarantine, we affirm that the rules of the Louisiana Board for the present month (April) are inadequate and unsafe, in that, they permit persons coming from places known to be infected with yellow fever to enter the city of New Orleans and the State of Louisiana without detention, whence they may go into any other states.

3. *Be it further Resolved,* That it is the belief of this Board that yellow fever was brought into the South in 1897, on or about the 12th of April, and having been imported in April of that year we see no reason why it may not be imported in April of this, or any other year.

4. *Be it further Resolved,* That as the safety of any one Gulf State from yellow fever is largely dependent upon that of the other Gulf States, and that whilst Alabama has succeeded during the past two summers in protecting herself from invasion, yet, this Board does most earnestly appeal to the Louisiana State Board of Health to so increase the restrictions of her maritime quarantine as to render it safe, both to their own State and to neighboring States.

5. *Be it further Resolved*, That this Board regards five days, the period of detention usually prescribed by Boards administering maritime quarantine for persons who have been, or may have been, exposed to yellow fever, as inadequate to cover all possible risks of the development of the disease, and would recommend that the period be extended to not less than eight days.

6. *Be it further Resolved*, That this Board believes that the utmost candor and confidence should be maintained betwixt different State and local Boards as to notification to be given of the presence in their respective territories of yellow fever, or of cases of fever suspected of being such, and that this Board expecting similar courtesy from other boards, hereby obligates itself to conform to the principle here laid down.

7. *Be it further Resolved*, That this Board avails itself of this occasion to express its deep and genuine sympathy with the people of Louisiana, and especially those of New Orleans, for the commercial and other disasters that have befallen them during the past three summers, on account of the prevalence in their State and city of yellow fever, and to express the hope that no similar disaster will befall them during the coming summer.

RECIPROCITY.

For several years past a movement has been on foot looking to the establishment of what is called "Reciprocity" between the states as to license to practice medicine, that is, that a license obtained in one state shall entitle the holder to practice not only in that state, but in other states bearing reciprocal relations to it on this subject. Unquestionably, good reasons can be assigned in support of the movement, but owing to some unusual features of our system of examining boards, and also to the fact that in order to establish such relations with other states a radical change of our organic law would be required, we are of the opinion that it is premature, at this time, for this Association to take any steps in the direction mentioned. In the course of time it may become practicable to co-operate with the movement. As expressive of the views we hold at present, we submit the following resolution and ask its adoption:

Be it Resolved by the Medical Association of the State of Alabama, That whilst the principle of "Reciprocity" between the states as to the issuance of license to practice medicine is recognized as fair and courteous, yet, owing to provisions in the law of this State that are somewhat unusual, and also to the fact that in order to co-operate with the movement it would become necessary to have our law regulating practice radically reconstructed by the General Assembly we deem it impracticable, at this time, to undertake the establishment of "Reciprocity" with other states.

RESOLUTIONS REFERRING TO QUARANTINE.

The following resolution adopted by the Board of Censors, acting as a Committee of Public Health for the State, is here submitted for the approval of the State Medical Association:

Be it Resolved by the Committee of Public Health for the State of Alabama, That all rights conferred upon, or duties assigned to, said committee as the agent of the State Board of Health by an Act entitled, An Act to Provide a System of Quarantine for this State, may be legally exercised or discharged by the State Health Officer, as the executive officer of this committee; provided, that said State Health Officer shall, from time to time, make due report to this committee of all official acts done in pursuance of the grant of power herein conferred, and provided further, that the said State Health Officer shall, on all proper occasions, call this committee together for deliberation and such action as may be taken.

The following resolutions, adopted by the Board of Censors, acting as a committee of public health for the State, are here submitted for the approval of this Association:

1. *Resolved*, That the State Health Officer upon the presentation of a certificate signed by the President of the State Board of Health and stamped with the seal of the State Medical Association stating that the holder is such officer, shall be considered as having complied with the requirements of section five (5) of an Act entitled, An Act to Provide a System of Quarantine for this State, and therefore shall be authorized to pass all quarantine lines established, or quarantine guards appointed, by any county, incorporated city, or town in this State.

2. *Resolved*, That whenever any quarantine officer or guard acting for the State, shall present a written certificate of his appointment, signed either by the State Health Officer, or by a supervisor of quarantine acting by the authority of said State Health Officer, such quarantine officer or guard shall be considered as having complied with section five (5) of an Act entited An Act to Provide a System of Quarantine for this State, and therefore shall be authorized to pass all quarantine lines established, or quarantine guards appointed, by any county, incorporated city or town in this State.

PART II. REPORT OF THE STATE BOARD OF MEDICAL EXAMINERS.

EXAMINATIONS BY THE STATE BOARD, FOR THE YEAR ENDING MARCH 31, 1900.

Total number examined	20
Number granted certificates	6
Number rejected	14
Percentage of rejections	70.00
Number of graduates examined	14
Number of graduates granted certificates	6
Number non-graduates examined	6
Number of non-graduates granted certificates	0

The examinations were as follows:

James Hawkins Heflin, Atlanta Medical College, 1895. Certificate refused.

Samuel Earle Centerfit, M D., University of New York, 1898. Certificate granted.

Hallett Webster Thompson, non-graduate; three courses Tulane. Certificate refused.

Albert Woods Dumas (colored), Illinois Medical College, 1899. Certificate refused.

Thomas Hezekiah Street, non-graduate; three courses Jefferson Medical College. Certificate refused.

Anderson Milton Williams (colored), non-graduate; three courses Leonard Medical College, Raleigh, N. C. Certificate refused.

August Sanguinetti, Montezuma University, Bessemer, Ala. Certificate refused.

William Earle Noel, Chattanooga Medical College, 1899. Certificate refused.

Elizabeth White, Birmingham Medical College, 1899. Certificate refused.

Henry Clayton Riley, non-graduate. Certificate refused.

Charles Odom Hadley (colored), Meharry Medical College, Nashville, Tenn., 1899. Certificate refused.

Logwood Ulysses Goin, M. D. (colored), Meharry Medical College, 1899. Certificate granted.

Thomas Nathaniel Harris, M. D. (colored), Meharry Medical College, 1899. Certificate granted.

William Henry Greer, non-graduate; two courses Grant University. Certificate refused.

William Cowden Miles, Birmingham Medical College, 1899. Certificate refused.

William Waldrop, M. D., Memphis Hospital Medical College, 1899. Certificate granted.

Frank Walton, M. D., Vanderbilt, 1899. Certificate granted.

Marvin Simeon Stough, M. D., College of Physicians and Surgeons, Atlanta, Ga., 1899. Certificate granted.

Robert Payne Stanfield, Memphis Hospital Medical College, 1898. Certificate refused.

Walter Dekel Ramsay, non-graduate; three courses Eclectic Medical College of Atlanta. Certificate refused.

EXAMINATION PAPERS ACCOUNT.

1899-1900.

DR. W. H. SANDERS, SENIOR CENSOR, M. A. S. A.,
In account with
The State Board of Health.

DEBITS.

To balance on hand from last year	$ 145 94
cash from State Board Health account (returned)	41 21
cash for examination papers and certificates	214 80
To total receipts	$ 401 95

CREDITS.

By cash to E. M. Trimble & Co., ribbon for certificates	$ 10 50
to T. Fitzwilliam & Co., engraving 40 certificates	12 00
expressage on certificates from New Orleans	40
to Ed. C. Fowler & Co., one box seals for certificates	25
to T. Fitzwilliam & Co., 25 certificates	8 50
to Brown Printing Co.	82 60
to postage returned to State Board Health account	26 50
loaned State Board Health account	111 70
By total expenditures	$ 252 45

RECAPITULATION.

To total receipts April 1, 1899, to April 1, 1900	$ 401 95
By total expenditures April 1, 1899, to April 1, 1900	252 45
To balance on hand	$ 149 50

THE BOOK OF THE RULES ACCOUNT.

APRIL 1, 1899, TO APRIL 1, 1900.

To balance on hand from last year	$ 14 82
cash for five copies of the Book of the Rules at 50c	2 50
To total receipts	$ 17 32
By postage on nine copies of B. of R. at 12c	1 08
To balance on hand	$ 16 24

EXAMINATIONS BY THE COUNTY BOARDS.

FOR THE YEAR ENDING MARCH 31, 1900.

For the past year eighty-nine examinations have been reported by the County Boards.

Seventy-three of the applicants were granted certificates and sixteen refused.

The rejected applicants were graduates of the following colleges: Meharry, 3; Chattanooga Medical College, 1; Memphis Hospital Medical College, 2; Medical College of Alabama, 1; Montezuma University (Bessemer, Ala.), 1; Atlanta Medical College, 2; Atlanta College of Physicians and Surgeons, 1; Vanderbilt, 1; Birmingham Medical College, 1; Barnes Medical College (St. Louis), 1; College not given, 2.

The examinations by the various boards were as follows:

Autauga County Board.—Henry Clay Clements, M. D., Medical College of Alabama, 1899. Certificate granted.

Baldwin County Board.—Clarence L. Mershon, M. D., Iowa College of Physicians and Surgeons, 1898. Certificate granted.

John Hamilton Hastie, M. D., University of Tennessee. Certificate granted.

Barbour County Board.—Robert Bernell Patterson. M. D., College of Physicians and Surgeons, Atlanta, 1899. Certificate granted.

Cato Hadras Wilson, M. D., Meharry Medical College, 1899. Certificate granted.

BIBB COUNTY BOARD.—Mercer Stillwell Davie, Jr., Tulane, 1899. Certificate granted.

M. C. Thomas, M. D., Tulane, 1899. Certificate granted.
Percy J. Hopkins, M. D., Vanderbilt, 1899. Certificate granted.
George Loach Waller, M. D., Vanderbilt, 1899. Certificate granted.

BLOUNT COUNTY BOARD.—Henry S. Ward, M. D., University of Nashville, 1898. Certificate granted.
John Howard Martin, M. D., Medical College of Alabama, 1899. Certificate granted.

BULLOCK COUNTY BOARD.—No examinations reported.

BUTLER COUNTY BOARD.—No examinations reported.

CALHOUN COUNTY BOARD.—William Gray Meharg, M. D., Memphis Hospital Medical College, 1899. Certificate granted.
Robert Turner Brown, M. D., Meharry, 1898. Cetificate refused.
Johnnie Carter Cunningham, M. D., Chattanooga Medical College, 1898. Certificate refused.

CHAMBERS COUNTY BOARD.—Thomas Hendon Haralson, M. D., Memphis Hospital Medical College, 1899. Certificate granted.
Henry Leonidas McClendon, M. D., University of the South. Certificate granted.

CHILTON COUNTY BOARD.—No examinations reported.

CHEROKEE COUNTY BOARD.—W. L. Stubbs, M. D. (No data.) Certificate granted.
B. A. Speer, (no data). Certificate refused.

CHOCTAW COUNTY BOARD.—J. H. Hendrix (no data). Certificate refused.

CLARKE COUNTY BOARD.—No examinations reported.

CLAY COUNTY BOARD.—No examinations reported.

CLEBURNE COUNTY BOARD.—Erastus Thomas Barker, M. D., Memphis Hospital Medical College, 1899. Certificate granted.

COFFEE COUNTY BOARD.—Benjamin Jefferson Lewis, M. D., Medical College of Alabama. Certificate granted.
Daniel Thomas Loflin, M. D., Medical College of Alabama, 1897. Certificate granted.

COLBERT COUNTY BOARD.—No examinations reported.

CONECUH COUNTY BOARD.—Hugh Wilson Ilderton, University of Georgia, 1891. Certificate granted.

COOSA COUNTY BOARD.—Bushrod Foley Laird, M. D., Ohio Medical College, 1874. Certificate granted.

COVINGTON COUNTY BOARD.—No examinations reported.

CRENSHAW COUNTY BOARD.—Joseph Benjamin Moxley, M. D., Georgia College Eclectic Medicine and Surgery, 1899. Certificate granted.

CULLMAN COUNTY BOARD.—Vincente Badolati, M. D., Naples, Italy, 1882. Certificate granted.

Luigi Cocciola, M. D., Naples, Italy, 1883. Certificate granted.

Doc James Parker, M. D., Memphis Hospital Medical College, 1899. Certificate granted.

DALE COUNTY BOARD.—Marion Simeon Stough, Atlanta College Physicians and Surgeons. Certificate refused.

DALLAS COUNTY BOARD.—Augustus Sanguinetti, Montezuma University, Bessemer, Ala., 1898. Certificate refused.

Henry Dawson Furniss, M. D., University of Virginia, 1899. Certificate granted.

DEKALB COUNTY BOARD.—No examinations reported.

ELMORE COUNTY BOARD.—William Douglass Thomasson, M. D., Medical College of Alabama, 1898. Certificate granted.

Eddie Penelton Moon, M. D., Vanderbilt, 1898. Certificate granted. Examination held in 1898.

ESCAMBIA COUNTY BOARD.—No examinations reported.

ETOWAH COUNTY BOARD.—No examinations reported

FAYETTE COUNTY BOARD.—No examinations reported.

FRANKLIN COUNTY BOARD.—Alonzo Graves, M. D.. Marion Sims, 1899. Certificate granted.

GENEVA COUNTY BOARD.—No examinations reported.

GREENE COUNTY BOARD.—No examinations reported.

HALE COUNTY BOARD.—John Harrison Owens, Memphis Hospital Medical College, 1899. Certificate refused.

Thomas Pennie Abernathy, M. D., Memphis Hospital Medical College, 1899. Certificate granted.

Levin Wailes Magruder, Jr., M. D., University of the South (Sewanee), 1899. Certificate granted.

Henry Tutwiler Young, M. D., University of the South (Sewanee), 1899. Certificate granted.

HENRY COUNTY BOARD.—Lee Roy Burdeshaw, M. D., Chattanooga Medical College, 1899. Certificate granted.

JACKSON COUNTY BOARD.—Jesse Lee Prince, M. D., Medical College of Alabama, 1899. Certificate granted.

James Ned Buchanan, M. D., University of Tennessee, 1899. Certificate granted.

Hugh Boyd, M. D., Memphis Hospital Medical College, 1899. Certificate granted.

JEFFERSON COUNTY BOARD.—Henry Thompson Breeden, Memphis Hospital Medical College, 1898. Certificate refused.

Francis Meason Phillips, M. D., Tulane, 1892. Certificate granted.

James Monroe Mason, Jr., M. D., Tulane, 1899. Certificate granted.

Logwood Ulysses Goin (colored), Meharry, 1899. Certificate refused.

Charles Odom Hadley, Meharry, 1899. Certificate refused.

Henry Erskine Pressley, M. D., W. & B. Hospital Medical College, 1899. Certificate granted.

Elbert Tile Fields, M. D., Bellevue, 1899. Certificate granted.

James Hawkins Heflin, Atlanta Medical College, 1895. Certificate refused.

Wellington Pride McAdory, M. D., University of Virginia, 1897. Certificate granted.

John Woodson Barksdale, M. D., Birmingham Medical College, 1899. Certificate granted.

Frank Walton, Vanderbilt, 1899. Certificate refused.

William Cowden Miles, Birmingham Medical College, 1899. Certificate refused.

William Thomson Berry, M. D., Vanderbilt, 1899. Certificate granted.

Alfred Flournoy Griggs, Atlanta Medical College, 1895. Certificate refused.

LAMAR COUNTY BOARD.—John Alexander Jackson, M. D., Memphis Hospital Medical College, 1899. Certificate granted.

James Elias Seay, M. D., Bellevue, 1899. Certificate granted.

George Silas Barksdale, M. D., Memphis Hospital Medical College, 1899. Certificate granted.

Kelly Jason Barrentine, Barnes Medical College, St. Louis, 1899. Certificate refused.

LAUDERDALE COUNTY BOARD.—No examinations reported.

LAWRENCE COUNTY BOARD.—No examinations reported.

LEE COUNTY BOARD.—Martin Luther Malloy, M. D., Medical College of Alabama, 1899. Certificate granted.

Adalbert Frank Crane, M. D., Detroit College of Medicine, 1897. Certificate granted.

Charles Frederick Sterling, M. D., Pulte Medical College, 1877. Certificate granted.

LIMESTONE COUNTY BOARD.—No examinations reported.

LOWNDES COUNTY BOARD.—James Neil McLean, M. D., Tulane, 1898. Certificate granted.

MACON COUNTY BOARD.—No examinations reported.

MADISON COUNTY BOARD.—No examinations reported.

MARENGO COUNTY BOARD.—No examinations reported.

MARSHALL COUNTY BOARD.—Olin May, M. D., Chattanooga Medical College, 1894. Certificate granted.

William Walter Whorton, M. D., Vanderbilt, 1899. Certificate granted.

MOBILE COUNTY BOARD.—Ernest Falanga, M. D., University of Naples, Italy, 1891. Certificate granted.

John Tillman England, M. D., Medical College of Alabama, 1899. Certificate granted.

MONROE COUNTY BOARD.—Walter Scott Sowell, M. D., Medical College of Alabama, 1899. Certificate granted.

MONTGOMERY COUNTY BOARD.—No examinations reported.

MORGAN COUNTY BOARD.—Jonas W. Aldridge, M. D., Meharry, 1899. Certificate granted.

PERRY COUNTY BOARD.—No examinations reported.

PICKENS COUNTY BOARD.—No examinations reported.

PIKE COUNTY BOARD.—Martin Lucius Watkins, M. D., Vanderbilt, 1899. Certificate granted.

Albert Levi Townsend, M. D., University of Nashville, 1899. Certificate granted.

Lewis Leon Dismukes, M. D., University of Tennessee, 1899. Certificate granted.

Randolph County Board.—Elbert Pierce Green, M. D., Medical College of Georgia, 1899. Certificate granted.

Charlton Thompson, M. D., Atlanta College of Physicians and Surgeons, 1899. Certificate granted.

John Thomas Striplin, M. D., University of Georgia, 1899. Certificate granted.

Russell County Board.—Frank Cornelius Caffey, (col.), Meharry, 1899. Certificate granted.

Alexander George William Allen, (col.), Meharry, 1899. Certificate granted.

Eddie Wise Jenkins, M. D., Bellevue, 1883. Certificate granted.

Isaac Cuthbert Evans, Jr., M. D., Medical College of Alabama, 1899. Certificate granted.

St. Clair County Board.—Esau A. Harris, M. D., University of the South, 1898. Certificate granted.

Baxter Rittenberry, M. D.,Birmingham Medical Coollege, 1899. Certificate granted.

Shelby County Board.—Edward Clifton Parker, M. D., Tulane, 1899. Certificate granted.

Fred Eustis Davis, M. D., Birmingham Medical College, 1899. Certificate granted.

Sumter County Board.—Fletcher B. Stallworth, M. D., Medical College of Alabama, 1899. Certificate granted.

Talladega County Board.—No examinations reported.

Tallapoosa County Board.—No examinations reported.

Tuscaloosa County Board.—George Rensaw Rau, M. D., University of the South, 1894. Certificate granted.

Walker County Board.—No examinations reported.

Washington County Board.—No examinations reported.

Wilcox County Board.—William Douglass Thomason, Medical College of Alabama, 1898. (Examination held in 1898.) Certificate refused.

Winston County Board—James Alexander McCullar, M. D., Vanderbilt, 1899. Certificate granted.

Christian Zimmer Corns, M. D., Vanderbilt, 1899. Certificate granted.

PART III. REPORT OF THE STATE COMMITTEE OF PUBLIC HEALTH.

Since the last meeting of the Association small-pox has continued to prevail in many counties of the State. The type of the disease has been, as for the past few years, generally mild, but in some instances a severe and fatal form has appeared.

In some counties the authorities have employed vigorous measures, and have promptly succeeded in suppressing the outbreaks; whilst, in other counties, much apathy and indifference have prevailed. Counties of the latter kind have continued as breeding places for the disease, from which it has been more or less widely distributed. To such counties properly attaches the odium for the continued prevalence of the disease.

The State Health Officer has visited within the past year about thirty counties of the State, some of them more than once, and has used his best endeavors to stimulate the authorities into action. In some instances he has succeeded, but in others he has failed.

The law-making power of the State must apply the remedy, and it is to be hoped that when the General Assembly convenes, in November next, the members thereof will be in such a frame of mind as to accept the advice of this Association upon a matter that comes directly within the sphere of its knowledge.

One of the serious difficulties which the State Health Officer has encountered has been to procure full and regular information as to the prevalence of small-pox in the State.

The health officers of many counties have furnished little or no information, consequently, it has been impossible to know exactly to what extent the disease has been prevailing. Some three months ago a circular letter of inquiry on this point was sent to every county health officer in the State. Of course, it is understood that in a county in which the authorities are doing nothing to control the disease the health officer of such county cannot be expected to know very definitely the number of cases existing in his county at any given time, but, making all due allowances, the State Health Officer has abundant reason to complain of the meagre information he has received from the health officers of many counties of the State. It has frequently happened that after visiting a county and rendering all the aid he could in devising ways of fighting the disease, the State Health Officer has received no further reports, and has been left in ignorance as to the subsequent progress of the disease, and as to the extent to which measures of extermination were pushed. This should not be. We are all working in a common cause, and each should know what the other is doing, in order that the best success may be achieved. If all would move forward simultaneously in the battle against small-pox, within sixty days, or less, the disease would be exterminated from the State. An achievement

of this sort would furnish a splendid endorsement of the efficiency of our public health system.

By all means let us co-operate in securing from the next General Assembly such legislation as is needed to perfect our system in every county of the State, and to give us the power of meeting and conquering infectious disease, let it appear in whatever form or in whatever place it may.

We have reason to congratulate this Association upon the escape which the State made from an invasion of yellow fever during the last summer. As is known to you, the disease prevailed, more or less extensively, in Louisiana, Mississippi, and Florida, but much to the credit of our quarantine system, and to the men who faithfully enforced it on the great highways of travel, Alabama remained absolutely and entirely free from the disease.

The value of protection from a disease, which, when it enters, spreads panic among the people and demoralizes commerce, cannot be over-estimated.

As heretofore, the protection of the last season was secured at remarkably small cost when compared with the benefits that accrued, only about $6,500.00 having been expended by the State for quarantine purposes.

We are glad to be able to state that the public health and quarantine system of the State is becoming better and better established as the practical application of it proves successful, and as the people have opportunities of witnessing its workings.

It may justly be claimed that the doctors of the State have created the system, and we earnestly appeal to them to remain faithful to it until perfected in all of its details, and standing ready to be set into immediate operation, when needed, in any part of the State.

The doctors have abundant reason to feel proud of their work thus far, but when the day of final and complete triumph comes, as it will, they will have just cause for exultation.

FINANCIAL STATEMENT.

THE STATE BOARD OF HEALTH,

In account with *The State of Alabama*.

DEBITS.

1899.			
April	30.	To cash from Treasurer	$ 250 00
May	31.	cash from Treasurer	250 00
June	30.	cash from Treasurer	250 00
July	31.	cash from Treasurer	250 00
Aug.	31.	cash from Treasurer	250 00
Sept.	30.	cash from Treasurer	250 00
Oct.	31.	cash from Treasurer	250 00
Nov.	30.	cash from Treasurer	250 00
Dec.	31.	cash from Treasurer	250 00
1900.			
Jan.	31.	cash from Treasurer	250 00
Feb.	28.	cash from Treasurer	250 00
March	31.	cash from Treasurer	250 00
		postage returned by Book of Rules acct.	1 08
		postage returned by Exam. Papers acct.	26 00
		To total receipts	$ 3,027 58

CREDITS.

1899.			
April	1.	By cash due Examination Papers acct.	$ 41 21
	17.	cash for postage	10 00
	18.	cash for expressage on Escambia Annual Report	25
	19.	cash for P. O. box rent	1 50
	26.	cash to W. R. Brassell, expense account	5 00
	26.	cash to W. L. Chambless, 3 1-2 days service in office during absence of Health Officer and Clerk on official business	8 50
	29.	cash for postage	10 00
	30.	Health Officer's salary for April	150 00
	30.	Clerk's salary for April	41 65
May	11.	cash to Postal Telegraph Co	1 75
	12.	cash to Western Union Telegraph Co	4 17
	16.	cash for postage	10 00
	19.	cash for expressage	25

	22.	cash to P. Haberkorn (map for office).....	25 00
	30.	cash for postage.....	10 00
	30.	cash Health Officer's salary for May.....	150 00
	30.	cash Clerk's salary for May.....	41 65
June	12.	cash for postage...	5 00
	24.	cash for postage.....	10 00
	27.	cash to W. U. Telegraph Co.....	5 72
	27.	cash for expressage on pkg. letter heads, St. Louis.....	30
	30.	cash Health Officer's salary for June.....	150 00
	30.	cash Clerk's salary for June.....	41 65
July	4.	cash to Tom Dodson, moving books from office to cellar.....	35
	4.	cash to Chas. Timoson, moving books from office to cellar..	65
	6.	cash to W. C. Holt, two books for office.....	10 00
	7.	cash to Postal Telegraph Co. (Mobile).....	3 27
	7.	cash to W. U. Telegraph Co....."	1 56
	7.	cash to Posta. Telegraph Co. (Montgomery)	2 94
	7.	cash to E. C. Fowler Co., stationery.....	3 80
	14.	cash to P. O. box rent.....	1 50
	14.	cash postage.....	10 00
	14.	cash drayage on books from Washington.....	25
	14.	Clerk's expenses to Florida on official business	52 50
	31.	Health Officer's salary for July.....	150 00
	31.	Clerk's salary for July.....	41 65
Aug.	1.	W. L. Chambless, services in office during absence of Health Officer and Clerk on official business...	4 50
	3.	one thousand 2c envelopes...	21 20
	25.	postage...	10 00
	31.	Health Officer's salary for August.....	150 00
	31.	Clerk's salary for August.....	41 65
Sept.	25.	postage.....	10 00
	30.	Health Officer's salary for September.....	150 00
	30.	Clerk's salary for September.....	41 65
Oct.	11.	box rent...	1 50
	12.	postage.....	10 00
	13.	E. L. Davant, repairing typewriter.....	1 50
	31.	Health Officer's salary for October.....	150 00
	31.	Clerk's salary for October.....	41 65
Nov.	11.	cash for expressage on letter heads, St. Louis	75
	13.	cash to E. C. Fowler & Co. (stationery).....	4 95
	16.	postage.....	10 00
	20.	expressage.....	40
	30.	Health Officer's salary for November.....	150 00
	30.	Clerk's salary for November...	41 65

Dec.	13.	postage for annual blanks	15 00
	14.	W. U. Telegraph Co. (Mobile)	1 98
	28.	postage	5 00
	31.	Health Officer's salary for December	150 00
	31.	Clerk's salary for December	41 65
1900.			
Jan.	3.	W. U. Telegraph Co. (Montgomery)	5 35
	3.	Postal Telegraph Co. (Montgomery)	1 40
	13.	postage	10 00
	23.	box rent	1 50
	31.	Health Officer's salary for January	150 00
	31.	Clerk's salary for January	41 65
Feb.	3.	One thousand envelopes (2c)	21 20
	3.	postage	10 00
	4.	Postal Telegraph Co. (Mobile)	8 14
	8.	Postal Telegraph Co. (Mobile)	5 22
	9.	Geo. D. Barnard & Co., St. Louis, letter heads	9 00
	20.	Brown Printing Co.	54 00
	26.	J. A. Eagan, annual dues Conf. State Boards of Health	10 10
	28.	expressage	30
	28.	Health Officer's salary for February	150 00
	28.	Clerk's salary for February	41 65
March	7.	cash to Postal Telegraph Co	47
	10.	postage	10 00
	12.	W. U. Telegraph Co	2 10
	30.	postage	10 00
	31.	P. O. box key	20
	31.	G. A. Knabe & Bro., bottle formaldehyde	50
	31.	Ed. C. Fowler & Co., stationery, etc	4 05
	31.	W. U. Telegraph Co	3 93
	31.	E. L. Davant, cleaning and repairing typewriter	5 00
	31.	Health Officer's salary for March	150 00
	31.	Clerk's salary for March	41 65
	31.	Postal Telegraph Co. (Montgomery)	80
	31.	Brown Printing Co., blanks, etc	124 50
	31.	Health Officer's expense accounts, 1899-1900	214 47
		By total expenditures	$3,139 28

RECAPITULATION.

By total expenditures April 1, 1899, to April 1, 1900	$3,139 28
To total receipts April 1, 1899, to April 1, 1900	$3,027 58
By balance due examination papers account	$ 111 70

THE COLLECTION OF VITAL AND MORTUARY STATISTICS.

The work of collecting vital and mortuary statistics for the year just closed may be summed up as follows:

1. Counties that have done perfect, or nearly perfect, work.

In this class the following counties are entitled to be placed:

Baldwin, Bullock, Clay, Conecuh, DeKalb, Escambia, Etowah, Fayette, Jefferson, Jackson, Lawrence, Mobile, St. Clair, Shelby.

2. Counties that have done fairly good work:

Barbour, Bibb, Butler, Coosa, Crenshaw, Dallas, Hale, Madison, Montgomery, Morgan, Pike, Randolph, Sumter, Talladega, Tallapoosa, Tuscaloosa, Winston.

3. Counties in which the work has been imperfectly done:

Blount, Calhoun, Cherokee, Choctaw, Clarke, Cleburne, Coffee, Cullman, Elmore, Geneva, Henry, Lamar, Monroe.

4. Counties that have done practically nothing:

Autauga, Chambers, Chilton, Colbert, Covington, Dale, Franklin, Greene, Lauderdale, Lee, Limestone, Lowndes, Macon, Marengo, Marion, Marshall, Perry, Pickens, Russell, Walker, Washington, Wilcox.

Whilst there is reason for encouragement, it is clear that the key to render the work of collecting vital and mortuary statistics successful in all parts of the State lies in procuring a law making it mandatory on the

courts of commissioners in the several counties of the State to appropriate adequate salaries for county health officers.

Some counties do this now and have been doing it for years, but in many connties no salary at all, or a very inadequate one, is appropriated.

It is greatly to be hoped that our General Assembly at its forthcoming meeting will give us the needed legislation.

All of which is respectfully submitted,

W. H. SANDERS, M. D., Chairman.

E. H. SHOLL, M. D.

C. H. FRANKLIN, M. D.

J. T. SEARCY, M. D.

J. P. FURNISS, M. D.

T. L. ROBERTSON, M. D.

E. L. MARECHAL, M. D.

GLENN ANDREWS. M. D.

W. M. WILKERSON, M. D.

Board of Censors, Acting as a Board of Medical Examiners and as a Committee of Public Health for the State.

NOTE.—Dr. G. A. KETCHUM, the tenth member of the Board, was unavoidably absent from the meeting.

During the reading of the Report the different sections thereof were acted upon as follows:

THE PRESIDENT'S MESSAGE.

The first recommendation of the President, suggesting that the effort to secure a law of compulsory vaccination be renewed at the next meeting of the General Assembly, was endorsed by the Board of Censors and adopted by the Association.

The second recommendation of the President, namely, that typhoid fever be placed upon the list of infectious diseases, and that physicians be required to report its presence to the health officials of their respective counties, was, upon the advice of the Board of Censors, not concurred in. The Board, however, recommended that the President's suggestion be borne in mind to be brought up for future consideration, which recommendation was adopted by the Association.

The President's third recommendation, proposing that efforts be made to induce the authorities of the State to separate in State prisons the tuberculous from non-tuberculous convicts, was endorsed by the Board of Censors, and approved by the Association.

The President's fourth recommendation, to the effect that efforts be made to secure an appropriation by the next General Assembly for the establishment of a "Colony" for epileptics, was, upon the advice of the Board of Censors, not concurred in, any movement in this direction being deemed premature.

The President's fifth recommendation, namely, that letters be addressed by the Board of Censors to the senators and representatives in Congress from this State, urging them to antagonize Senator Gallinger's Anti-Vivisection Bill, was approved.

The President's sixth recommendation, referring to Contract Practice, had already been carried out by the Board of Censors, the results of the consideration of the subject being embodied in another part of the Report.

The views the President expressed on the subject of the collection of vital and mortuary statistics and those he announced on the subject of the promotion of temperance met with the hearty approval of the Association.

Finally, the appeal of the President in behalf of the "Cochran Monument" met with the warm endorsement of the Association.

Whilst expressing deep sympathy with the cause and hope for its success, the Board of Censors pointed out the unconstitutionality of the President's recommendation that one thousand dollars be appropriated out of the funds of the Association toward the erection of the proposed monument, and advised that this recommendation be not concurred in, which advice was adopted.

THE REPORTS OF THE VICE-PRESIDENTS.

The next section of the Report of the Board of Censors taken up for consideration was that referring to the Reports of the Vice Presidents, the recommendations of the Board applying thereto being adopted.

The following sections of the Report were considered separately and adopted by the Association:

The section on the Report of the Secretary and the Book of the Rolls.

The Report of the Committee of Publication.

The Report of the Treasurer and the Book of Accounts.

The Accounts of the State Health Officer.

Revision of the Minutes of 1899.

Delinquent County Societies.

Legislation.

New Edition of the Book of the Rules.

New Charters.

Amendments to the Constitution.

The next section of the Report considered was that referring to Contract Practice. During the consideration of this part of the Report Dr. Wilder, of Birmingham,

moved that each subdivision of the Ordinance bearing upon contract practice, submitted by the Board of Censors, be considered *seriatim*. The motion was lost. The section as read, including the ordinance contained therein, was unanimously adopted.

The section of the Report devoted to Outbreaks of Infectious Diseases in a County, including an ordinance on that subject, was next considered and unanimously adopted.

The three following named sections of the Report were considered successively and adopted:

Examinations for license to practice must be made in English, together with ordinance providing therefor.

Practice by under-graduates.

Shall newly-elected counsellors be permitted to vote?

The next section of the Report considered was devoted to the resolutions of the Jefferson County Medical Society. This section was discussed at considerable length by Drs. Wilder, Harrison, Henry, Perry, Davis (W. E. B.), Moody, Cunningham, Wilkinson (J. A.), and Sanders.

The discussion having been closed, the section, including a set of resolutions, was unanimously adopted.

The consideration of the next section of the Report—devoted to Maritime Quarantine—then followed. This section, together with a set of resolutions on the subject, was unanimously adopted.

The next section of the Report was devoted to the subject of "Reciprocity," and, after due consideration, was unanimously adopted, including a resolution on the subject.

DIED.

Summers, Thos. O., M. D., St. Louis, Mo.

No objection being made to the correctness of this schedule, the President, under the rules, ordered that the name be stricken from the Roll of Correspondents.

(4.) THE ROLL OF THE OFFICERS.

The Committee on the Revision of the Rolls reported that the election of the following named officers would now be in order:

A president for one year.

A junior vice-president for two years, for the northern division of the State.

Two members of the Board of Censors for five years each, to succeed Dr. G. A. Ketchum, of Mobile, and Dr. T. L. Robertson, of Birmingham, whose terms expire with this meeting.

One censor to fill the unexpired term of Dr. B. J. Baldwin, of Montgomery, resigned.

An orator, and an alternate orator.

No objection being made to the correctness of this report, the President, under the rules, ordered that elections for the positions named be now proceeded with, and appointed as tellers Drs. Hunter, Howle and Inge.

The result of the several ballots taken was the election of the following named officers:

President—Dr. R. M. Cunningham, of Ensley.

Junior Vice-President—Dr. W. T. Pride, of Madison Station.

Censors for five years—Dr. T. L. Robertson, of Birmingham, and Dr. V. P. Gaines, of Mobile.

Censor for the unexpired term of Dr. B. J. Baldwin—Dr. W. M. Wilkerson, of Montgomery.

Orator—Dr. W. G. Harrison, of Talladega.

Alternate Orator—Dr. B. R. Pearson, of Montgomery.

The Revision of the Roll of the Officers was here ended, said roll to stand closed until the next annual meeting of the Association.

The Election of Counsellors.

The Committee on the Revision of the Rolls reported that there were nine vacancies in the college of counsellors, whereupon, the president ordered that a ballot be taken to fill these vacancies, which ballot resulted in the election of the following named gentlemen: Tam, S. S., Mobile; Green, Henry, Bolling; Watson, W. W., Furman; Thigpen, C. A., Montgomery; Robertson, W. H., Clayton; Justice, R. L., Geneva; Ard, E. B., Ozark; Lawrence, G. W. D., Turkeytown; Maples, W. C., Scottsboro.

The election having been closed, the installation of officers was next in order.

Before proceeding with the installation of officers, Dr. LeGrand, the retiring president, spoke as follows:

In retiring from the chair as president of this Association, I beg to again thank you most sincerely for the high honor which you bestowed upon me in selecting me for this position.

I would not be doing justice to myself did I not take advantage of this opportunity to thank those who have so cheerfully and ably contributed to make this meeting, both scientifically and socially, one of the most successful ever held.

For the earnest co-operation which I have received during my administration and for the courtesy that has been accorded me during this meeting, now drawing to a close, I am profoundly grateful.

The successful results of this meeting will, I believe, give an impetus to the work of this Association for the future, and help to still further raise the high record which it has for so long a time maintained.

Wishing you all safe return to your homes, we will now proceed with the installation of the officers just elected.

The President then appointed a committee to escort the newly-elected President, Dr. R. M. Cunningham, to the rostrum, and introduced him to the Association.

Dr. Cunningham, on assuming the chair, delivered the following address:

"*Mr. President and Gentlemen of the Association:*

Candor compels me to say that I aspired to this high office, the highest in the gift of the medical profession of the State. Believe me, however, when I say to you that I did not expect it at this time. It is a positon to which any physician may honorably aspire, and one which if he fills creditably to himself and profitably to the Association will redound to his honor. I am not quite sure that I can explain my selection as president of the Association at this meeting. I am of the opinion, however, that it is due to the fact that I have devoted my life's work to the medical profession. I have been a student of medicine since I was a boy and I trust that I have acquired sufficient reputation and distinction in the profession as not to bring reproach upon the members of this Association, or reflect upon their judgment in the selection made. The medical profession is the highest and noblest of all earthly callings. It has to deal with the laws and phenomena of nature, and is, therefore, a science. Nature, the handiwork of the Creator, while ever changing in relation and appearance, is unchanging in law and purpose. There are laws that govern health, and laws that produce disease. It is the physician's province to know these laws, to recognize their phenomena, and to strictly apply them in the fostering of health and the prevention and cure of disease.

Nature does not interfere. It is neither biased nor prejudiced and is uncontrolled by circumstance or condition. On the contrary, it largely controls circumstances and conditions, and the results produced by certain causes under given conditions and the results produced by the same causes under opposite conditions are all in obedience to natural law. Therefore, the student of nature has an exact master and an impartial judge. If there be error it is in the student who fails to comprehend the hidden truths in the mysterious labyrinths of nature, or to recognize their phenomena, or to interpret their meaning. In no other relation of life can man rely wholly upon the fidelity and truthfulness of the laws and conditions of his avocation. Therefore, the physician is indeed the architect of his own future, and, if he fails, it is largely attributable to his want of knowledge of the facts of his profession.

An honest man loves truth, a sincere investigator searches for the truth, a courageous man will stand by it.

As the President of this Association I shall bring to bear upon the duties of the office all the fidelity and ability of which I am capable. There are a great many things about the rules and regulations of the Association with which I am not familiar. I shall attempt to learn these rules and regulations that I may intelligently discharge the duties of the office. I sincerely hope that I will have the co-operation, help, and encouragement of the entire profession.

I recognize that I succeed to an office which has been filled by some of the most distinguished men of the State. I appreciate that if I come up to the high standard set by my predecessors I must be faithful, constant, and efficient.

Please accept my sincere thanks for the great honor you have done me. Coming at this time, under existing circumstances, I especially appreciate it as one of the greatest honors of my life."

President Cunningham then announced as the next order of business the installation of the Junior Vice-President, and appointed a committee to escort Dr. Pride to the rostrum. Upon investigation it was ascertained that Dr. Pride had left the hall, consequently his formal installation was omitted.

The installation of members of the Board of Censors being next in order, the installation committee escorted Drs. T. L. Robertson and V. P. Gaines to the rostrum, and they were presented to the Association by President Cunningham.

Dr. Robertson, in accepting the position of member of the Board of Censors for five years, expressed warm appreciation of the confidence that had been reposed in him by electing him his own successor, and pledged his best efforts to discharge the duties which the position carries with it.

Dr. Gaines spoke as follows:

In accepting the position of member of the Board of Censors I beg to express my high appreciation of the honor conferred, and to say that I am duly mindful of the responsibilities imposed. The latter, I shall always endeavor to discharge to the best of my ability, thus contributing in whatever way I can to upholding the dignity and enlarging the usefulness of this Association.

I fully realize that this honor has fallen upon me by reason of the unavoidable absence from this meeting of Dr. Geo. A. Ketchum, one of our oldest and most eminent members. Had he been present he would have been unanimously chosen his own successor to a position he has filled with such conspicuous ability since there was a Board of Censors of this Association, now more than twenty-five years.

No one regrets more than I do the recent accident which befell him and prevented him from being present, or the inflexibility of our rules that forbids the election of an absent member to any position. Although his disability is temporary, yet it was a cruel fate that brought it on just at this time.

He is one of the founders and builders of this splendid organization, and so long as such men occupy positions that place them in active control of the work and policy of this Association, the younger members experience a most comfortable feeling of security that all will go well.

I feel sure that this Association will embrace the first opportunity that may present for restoring him to a position which has been lost without fault of his own.

Again I pledge my most faithful efforts to discharge obligations which have been quite unexpectedly imposed upon me.

Dr. W. M. Wilkerson, the third member elected on the Board of Censors, not being present, his formal installation was necessarily omitted.

Dr. W. Groce Harrison, the newly-elected orator, was next escorted to the rostrum and introduced to the Association. In accepting the position Dr. H. spoke in appropriate and happy terms, thus justifying the choice of the Association and giving promise of what might be expected next year.

Dr. B. R. Pearson, the alternate orator, was next escorted to the rostrum and introduced to the Association. Dr. Pearson duly acknowledged the honor conferred.

This completed the installation of officers.

Dr. L. L. Hill offered the following resolution:

Resolved, That in recognition of the services of Dr. H. G. Perry in compiling an index to the volumes of Transactions of this Association up to 1898, the Publishing Committee be instructed to have a suitable label printed and sent out with the volume of Transactions of 1900 to every member of this Association entitled to said volume, the label to be placed upon the copy of Transactions of 1898, showing that it contains said index.

On motion the resolution was adopted.

Dr. H. G. Perry submitted the following resolution:

Resolved, That with the view of advancing the interests of this Association the Report of the Board of Censors submitted to, and adopted by, this meeting be printed in pamphlet form, and that a copy thereof be sent to every doctor in the State.

Upon motion the resolution was unanimously adopted.

Dr. Glenn Andrews offered the following resolution:

Resolved, That the sincere thanks of this Association be returned to the L. & N. Railway Company for the generous courtesy of a complimentary train to convey the members and visitors to and from Jackson's Lake yesterday, said courtesy having been extended through Col. J. M. Falkner, the District Attorney of the Road.

Upon motion the resolution was adopted.

The special committee on the "Cochran Monument" submitted the following report:

REPORT OF THE COMMITTEE ON COCHRAN MONUMENT.

The undersigned, constituting a committee on the "Cochran Monument," beg leave to report that various circumstances have contributed to delay the committee in carrying out the instructions of the Association.

It will be remembered that it was determined to erect a monument at the meeting of the Association held in Selma, in 1897, and that Selma was then named as the place at which the monument was to be erected.

Believing that a very general feeling prevailed among the members of the Association that the location of the monument should be changed from Selma to Montgomery, the Committee deemed it wise not to take any steps in the matter until another meeting of the Association could be held, at which the question of location could be reconsidered.

At the meeting of the Association, held in Birmingham, in 1898, the question of location was reconsidered, and it was decided that Montgomery was the most appropriate location for the monument. It was also decided to obtain the privilege, if possible, of having the monument erected in the grounds of the Capitol.

During the meeting of the General Assembly, for 1898-99, the enactment of a joint resolution by both Houses, granting the privilege of having the monument erected either in the Capitol building or grounds, as might be determined, was obtained.

At the meeting of the Association, held in Mobile, in 1899, no special action was taken in reference to the matter.

Believing that the time is now auspicious for undertaking the work, the Committee unanimously recommend that a full length bronze statue, upon a suitable granite pedestal, be erected in the Capitol grounds, and they estimate that five thousand dollars will be required in order to complete the work.

To raise this amount, the Committee recommend that the county societies shall voluntarily contribute fifteen hundred dollars annually until the required amount is reached, which could be done in about three years, or a little over.

The Committee propose that the amount to be annually contributed by the county societies be pro-rated among them according to their numerical strength and financial ability. It is believed that by this plan the necessary sum could be easily raised, without imposing upon any society a burden its members would not cheerfully bear.

Should the plan for raising the necessary fund proposed by the Committee be adopted by the Association, the Committee will, as soon as practicable, assign to each county society the amount it

will be expected to contribute for the current year, and will employ such other means as may be deemed wise and proper to achieve the object sought.

W. H. SANDERS, M. D.,
BENJ. J. BALDWIN, M. D.,
J. B. GASTON, M. D.,
Committee.

The report was unanimously adopted, and the committee was instructed to proceed as early as practicable to carry out the recommendations therein contained.

Dr. R. S. Hill offered the following resolutions:

1. *Resolved*, That registration be the only evidence accepted by this Association of the attendance of a counsellor.
2. *Resolved*, That every counsellor be notified of this action of the Association.

On motion the resolutions were referred to the Board of Censors.

The selection of the next place of meeting was then declared to be in order.

Dr. S. G. Gay, of Selma, extended a cordial invitation to the Association to hold its next meeting in that city, and upon ballot it was so decided.

The meeting was then adjourned *sine die.*

REGISTRATION LIST.

During the meeting the following named counsellors, delegates, and visitors appeared and registered:

GRAND SENIOR LIFE COUNSELLORS.

Furniss, John Perkins, Selma, Dallas county.
Gaines, Vivian Pendleton, Mobile, Mobile county.
Gaston, John Brown, Montgomery, Montgomery county.
Hogan, Samuel Mardis, Montgomery, Montgomery county.
Jackson, Walter Clark, Montgomery, Montgomery county.
McKittrick, Adam Alexander, Evergreen, Conecuh county.
Michel, Richard Frazer, Montgomery, Montgomery county.
Sanders, William Henry, Mobile, Mobile county.
Total, 8.

GRAND SENIOR COUNSELLORS.

Baldwin, Benjamin James, Montgomery, Montgomery county.
Bragg, Shirley, Montgomery, Montgomery county.
Cason, Davis Elmore, Ashville, St. Clair county.
Franklin, Charles Higgs, Union Springs, Bullock county.
Fletcher, Richard Matthew, Madison, Madison county.
Goggans, James Adrian, Alexander City, Tallapoosa county.
Goode, Rhett, Mobile, Mobile county.
Goodwin, Joseph Anderson, Jasper, Walker county.
Harlan, John Jefferson, Dadeville, Tallapoosa county.
Hill, Luther Leonidas, Montgomery, Montgomery county.
Huggins, Jacob, Newbern, Hale county.
Inge, Henry Tutwiler, Mobile, Mobile county.
Jay, Andrew, Evergreen, Conecuh county.
Kendrick, Joel Cloud, Greenville, Butler county.
LeGrand, John Clark, Birmingham, Jefferson county
Lowry, Samuel Hickman, Huntsville, Madison county.
Maréchal, Edwin Lesley, Mobile, Mobile county.
Robertson, Thaddeus Lindley, Birmingham, Jefferson county.
Searcy, James Thomas, Tuscaloosa, Tuscaloosa county.
Sholl, Edward Henry, Birmingham, Jefferson county.
Stovall, Andrew McAdams, Jasper, Walker county.
Trent, Powhatan Green, Roanoke, Randolph county.
Wilkerson, Wooten Moore, Montgomery, Montgomery county.
Total Grand Senior Counsellors, 23.

SENIOR COUNSELLORS.

Andrews, Glenn, Montgomery, Montgomery county.
Blake, Wyatt Heflin, Wetumpka, Elmore county.

Bondurant, Eugene DuBose, Mobile, Mobile county.
Brown, George Summers, Birmingham, Jefferson county.
Cunningham, Russell McWhorter, Ensley, Jefferson county.
Duggar, Reuben Henry, Gallion, Hale county.
Gay, Samuel Gilbert, Selma, Dallas county.
Harper, Robert Franklin, Ozark. Dale county.
Heflin, Wyatt, Birmingham, Jefferson county.
Hunter, Henry Mitchell, Union Springs, Bullock county.
McCants, Robert Beall, Demopolis, Marengo county.
Moody, Henry Altamont, Bailey Springs, Lauderdale county.
Moon, William Henry, Goodwater, Coosa county.
Parke, Thomas Duke, Birmingham, Jefferson county.
Perry, Henry Gaither, Greensboro, Hale county.
Watkins, Isaac LaFayette, Montgomery, Montgomery county.
Whitfield, Bryan Watkins, Demopolis, Marengo county.
Williams, John Harford, Columbiana, Shelby county.
Wilkinson, John Edward, Prattville, Autauga county.
Total, 19.

JUNIOR COUNSELLORS.

Brannon, Henry Lee, Eufaula, Barbour county.
Bennett, Benjamin Franklin, Louisville, Barbour county.
Davis, Wm. Elias Brownlee, Birmingham, Jefferson county.
Dixon, John, Fayettville, Talladega county.
Dryer, Thomas Edmund, Huntsville, Madison county.
Gaston, Joseph Lucius, Montgomery, Montgomery county.
Harrison, William Groce, Talladega, Talladega county.
Henderson, Stephen Cary, Brewton, Escambia county.
Hill, Robert Sommerville, Montgomery, Montgomery county.
Howle, James Augustus, Eclectic, Elmore county.
Johnston, Louis William, Tuskegee, Macon county.
Jones, Eli Spears, Gadsden, Etowah county.
Justice, Oscar Suttle, Wetumpka, Elmore county.
McEachern, John Adolphus, Brundidge, Pike county.
Moody, Fleming Isaac, Dothan, Henry county.
Pearson, Benjamin Rush, Montgomery, Montgomery county.
Pride, William Thomas, Madison, Madison county.
Robinson, Thomas Franklin, Bessemer, Jefferson county.
Sutton, Robert Lee, Orrville, Dallas county.
Swann, Joseph Charles, Wedowee, Randolph county
Waller, George Platt, Montgomery, Montgomery county.
Welch, Samuel Wallace, Alpine, Talladega county.
Whitfield, James Bryan, Jefferson, Marengo county.
Wyman, Benjamin Leon, Birmingham, Jefferson county.
Total, 24.

DELEGATES.

Autauga County—None.
Baldwin County—J. H. Hastie, Stockton.
Barbour County—J. L. Houston, Harris; W. G. Lewis, Eufaula.
Bibb County—M. C Schoolar, Centreville.
Blount County—None.
Bullock County—T. J. Dean, Union Springs; F. P. Hixon, Perote.
Butler County—Henry Green, Bolling.
Calhoun County—J. C. Brock, Anniston; J. M. Whiteside, Oxford.
Chambers County—None.
Cherokee County—A. C. Shamblin, Broomtown.
Chilton County—None.
Choctaw County—None.
Clarke County—None.
Clay Coanty—None.
Cleburne County—S. L. B. Black, Fruithurst.
Coffee County—P. T. Fleming, Enterprise.
Colbert County—None.
Conecuh County—None.
Coosa County—J. C. Cousins, Equality.
Covington County—None.
Crenshaw County—None.
Cullman County—None.
Dale County—E. B. Ard, Ozark.
Dallas County—D. B. Edwards, Benton.
DeKalb County—None.
Elmore County—W. A. Huddleston, Wetumpka.
Escambia County—W. L. Abernathy, Flomaton
Etowah County—G. W. D. Lawrence, Turkeytown.
Fayette County—J. G. Smith, Bankston.
Franklin County—None.
Geneva County—R. L. Justice, Geneva.
Greene County—None.
Hale County—J. P. Borden, Greensboro.
Henry County—M. S Davie, Dothan; J. E. Lee, Gordan.
Jackson County—W. C. Maples, Scottsboro.
Jefferson County—W. H. Wilder, Birmingham; C. Wilson, Birmingham.
Lamar County—D C. Morton, Vernon.
Lauderdale County—None.
Lawrence County—B. T. Etheridge, Town Creek.
Lee County—W. B. Watkins, Opelika.
Limestone County—None.
Lowndes County—F. Shackleford, Letohatchie.

Macon County—J. T. May, Notasulga; P. Reynolds, Warrior Stand.
Madison County—None.
Marengo County—J. R. Goodloe, and W. C. Lockhart, Demopolis.
Marion County—K. B. Goggans, Hackleburg.
Marshall County—None.
Mobile County—P. J. M. Acker, W. T. Henderson, Mobile.
Monroe County—W. J. Mason, Activity.
Montgomery County—R. Goldthwaite, J. M. Sadler, Montgomery.
Morgan County—None.
Perry County—None.
Pickens County—None.
Pike County—J. W. Robertson, Brundidge.
Randolph County—None.
Russell County—None.
Shelby County—D. L. Wilkinson, Montevallo.
St. Clair County—None.
Sumter County—J. N. Gilmore, Gaston.
Talladega County—None.
Tallapoosa County—H. S Bruce, Camp Hill.
Tuscaloosa County—S. F. Mayfield, Northport.
Walker County—G. S. Gilder, Galloway.
Washington County—None.
Wilcox County—None.
Winston County—A. S. Palmer, Haleyville.

Twenty-eight counties sending no delegates.
Thirty-eight counties sending 47 delegates.

VISITORS.

NAME.	RESIDENCE.	COUNTY.
Abraham, J. H.	New York.	
Anderson, J. M.	Montgomery,	Montgomery.
Andrews, W. J,	New York.	
Baker, J. N.	Montgomery,	Montgomery.
Barclay, J. W.	Birmingham,	Jefferson.
Battle, J. T.	Highland Park,	Montgomery.
Beard, J. S.	Troy,	Pike.
Billing, S. A.	Montgomery,	Montgomery.
Boland, J. H.	"	"
Bonner, T. H.	Hickory Flat,	Chambers.
Carlisle, S. O.	Dothan,	Henry.
Centerfit, S. E.	Montgomery,	Montgomery.
Chapman, B. S.	"	"

Claughton, A. B.	Maplesville,	Chilton.
Cobb, R. W.	Philadelphia.	
Collier, J. M.	Troy,	Pike.
Copeland, W. P.	Eufaula,	Barbour.
Darnell, B. F.	Fitzpatrick,	Bullock.
Dennis, G. A.	Montgomery,	Montgomery.
Disharoon, H. B.	Roanoke,	Randolph.
Donald, E. G.	Monterey,	Butler.
Donald, J. M.	Bridges,	Dallas.
Estes, M. J. E.	Deatsville,	Elmore.
Franklin, C. M.	Union Springs,	Bullock.
Forbes, W. N.		
Gatchell, E. S.	Montgomery,	Montgomery.
Graham, B. E.	Gu ley	Madison.
Grimes, E. D.	Montgomery,	Montgomery.
Hamrick, R. H.	Pratt City,	Jefferson.
Harper, W. W.	Selma.	Dallas.
Harris. S.	Union Springs,	Bullock.
Henning, W. S.		
Hill, R. M., Jr.	Ware,	Elmore.
Horn, J. R.	Luverne,	Crenshaw.
Hutchinson, W. H.	Childersburg,	Talladega.
Ivey, B. P.	Montgomery,	Montgomery.
Jelks, J. T.	Hot Springs, Ark.	
Johnson, O.	Pike Road,	Montgomery.
Jones, W. K.	Montgomery,	Montgomery.
Jones, E. A.	Birmingham,	Jefferson.
Kendall, W. Q.	Berlin,	Dallas.
Kendrick, W. T.	Montgomery,	Montgomery.
Killebrew, J. B,	Mobile,	Mobile.
Killough J N.	Huffman,	Jefferson.
Kirkpatrick, M. B.	Montgomery,	Montgomery.
Letcher, J. B.	Shorters,	Macon.
Lewis, B. J.	Frisco,	Coffee.
Lightfoot, J. S.	Cross Keys,	Macon.
Lloyd. S.	New York.	
McClendon, J. W.	Dadeville,	Tallapoosa.
McConnico, F. H.	Montgomery,	Montgomery.
McCoy C B.	Opelika,	Lee.
McCrummin, N. H.	Ramer,	Montgomery.
McDade J	Waugh,	"
McEachern, C. P.	Banks,	Pike.
McIntosh, W. P.	Mobile.	Mobile.
Mason, J. M.	Birmingham,	Jefferson.
Matthews, E. A.	Clanton,	Chilton.
Mobley, R. V.	Birmingham,	Jefferson.

Montgomery, A. H.	Montgomery,	Montgomery.
Morris, L. C.	Birmingham,	Jefferson.
Naftel, J. H.	Montgomery,	Montgomery.
Norris, J. P.	Uhland,	Russell.
Palmer, J. G.	Opelika.	Lee.
Pearson, C. F.	Montgomery,	Montgomery.
Persons, H. S.	Montgomery,	Montgomery.
Perkins, J. S.	Selma,	Dallas.
Pitts, R. N.	Montgomery,	Montgomery.
Pollard, C. T.	"	"
Prather. W. B.	Seale,	Russell.
Robertson, W. H.	Clayton,	Barbour.
Robinson, E. M.	Birmingham,	Jefferson.
Rogers, M.	"	"
Rushing, T. E.	Pike Road,	Montgomery.
Sewell, J. W.	Titus,	Elmore.
Stevenson, F C.	Montgomery,	Montgomery.
Stewart, W. E.	Clanton,	Chilton.
Sturm, M.	Montgomery,	Montgomery.
Tam, S. S.	Mobile,	Mobile.
Talley, D. F.	Birmingham,	Jefferson.
Taylor, J C.	Haleyville,	Winston.
Taylor, W. H.	Central Mills,	Dallas.
Thorington, T. C.	Montgomery,	Montgomery.
Turner, B. D.	New Orleans.	
Weedon, H.	Montgomery.	Montgomery.
Wilkerson, C. W.	"	"
Wilkinson, J. A.	"	"
Winchester, R. L.	Natchez, Miss.	

Visitors who registered, 90.

SUMMARY.

Grand Senior Life Counsellors	8
Grand Senior Counsellors	23
Senior Counsellors	19
Junior Counsellors	24
Delegates	47
Visitors	90
Total registered attendance	211

Claughton, A. B.	Maplesville,	Chilton.
Cobb, R. W.	Philadelphia.	
Collier, J. M.	Troy,	Pike.
Copeland, W. P.	Eufaula,	Barbour.
Darnell, B. F.	Fitzpatrick,	Bullock.
Dennis, G. A.	Montgomery,	Montgomery.
Disharoon, H. B.	Roanoke,	Randolph.
Donald, E. G.	Monterey,	Butler.
Donald, J. M.	Bridges,	Dallas.
Estes, M. J. E.	Deatsville,	Elmore.
Franklin, C. M.	Union Springs,	Bullock.
Forbes, W. N.		
Gatchell, E. S.	Montgomery,	Montgomery.
Graham, B. E.	Gurley,	Madison.
Grimes, E. D.	Montgomery,	Montgomery.
Hamrick, R. H.	Pratt City,	Jefferson.
Harper, W. W.	Selma.	Dallas.
Harris, S.	Union Springs,	Bullock.
Henning, W. S.		
Hill, R. M., Jr.	Ware,	Elmore.
Horn, J. R.	Luverne,	Crenshaw.
Hutchinson, W. H.	Childersburg,	Talladega.
Ivey, B. P.	Montgomery,	Montgomery.
Jelks, J. T.	Hot Springs, Ark.	
Johnson, O.	Pike Road	Montgomery.
Jones, W. K.	Montgomery,	Montgomery.
Jones, E. A.	Birmingham,	Jefferson.
Kendall, W. Q.	Berlin,	Dallas.
Kendrick, W. T.	Montgomery,	Montgomery.
Killebrew, J. B,	Mobile,	Mobile.
Killough, J. N.	Huffman,	Jefferson.
Kirkpatrick, M. B.	Montgomery,	Montgomery.
Letcher, J. B.	Shorters,	Macon.
Lewis, B. J.	Frisco,	Coffee.
Lightfoot, J. S.	Cross Keys,	Macon.
Lloyd, S.	New York.	
McClendon, J. W.	Dadeville,	Tallapoosa.
McConnico, F. H.	Montgomery,	Montgomery.
McCoy C. B.	Opelika,	Lee.
McCrummin, N. H.	Ramer,	Montgomery.
McDade, J.	Waugh,	"
McEachern, C. P.	Banks,	Pike.
McIntosh, W. P.	Mobile.	Mobile.
Mason, J. M.	Birmingham,	Jefferson.
Matthews, E. A.	Clanton,	Chilton.
Mobley, R. V.	Birmingham,	Jefferson.

Montgomery, A. H.	Montgomery,	Montgomery.
Morris, L. C.	Birmingham,	Jefferson.
Naftel, J. H.	Montgomery,	Montgomery.
Norris, J. P.	Uhland,	Russell.
Palmer, J. G.	Opelika.	Lee.
Pearson, C. F.	Montgomery,	Montgomery.
Persons, H. S.	Montgomery,	Montgomery.
Perkins, J. S.	Selma,	Dallas.
Pitts, R. N.	Montgomery,	Montgomery.
Pollard, C. T.	"	"
Prather. W. B.	Seale,	Russell.
Robertson, W. H.	Clayton,	Barbour.
Robinson, E. M.	Birmingham,	Jefferson.
Rogers, M.	"	"
Rushing, T. E.	Pike Road,	Montgomery.
Sewell, J. W.	Titus,	Elmore.
Stevenson, F C.	Montgomery,	Montgomery.
Stewart, W. E.	Clanton,	Chilton.
Sturm, M.	Montgomery,	Montgomery.
Tam, S. S.	Mobile,	Mobile.
Talley, D. F.	Birmingham,	Jefferson.
Taylor, J C.	Haleyville,	Winston.
Taylor, W. H.	Central Mills,	Dallas.
Thorington, T. C.	Montgomery,	Montgomery.
Turner, B. D.	New Orleans.	
Weedon, H.	Montgomery.	Montgomery.
Wilkerson, C. W.	"	"
Wilkinson, J. A.	"	"
Winchester, R. L.	Natchez, Miss.	

Visitors who registered, 90.

SUMMARY.

Grand Senior Life Counsellors	8
Grand Senior Counsellors	23
Senior Counsellors	19
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Visitors	90
Total registered attendance	211

THE ANNUAL REGISTER

OF THE

MEDICAL ASSOCIATION

OF THE

STATE OF ALABAMA.

THE BOOK OF THE ROLLS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

☞ INTRODUCTION.—OF LEGAL IMPORTANCE TO EVERY PHYSICIAN IN THE STATE OF ALABAMA.

Owing to the legal relations which *each* member of *each* county medical society bears to the STATE OF ALABAMA (which relations are set forth in the Code of the State), it is *absolutely necessary* that the presidents, secretaries, treasurers, members of the boards of censors, and each individual member of the societies, should see that the roster of their society is sent to the Secretary of the State Association in accordance with the specific instructions, which are printed on the blanks sent to the secretary of each society.

It is, therefore, urged upon the officers of each county medical society to see that the reports be, in future, properly filled out in accordance with the printed instructions on the blank. It is advised that the secretaries compare their reports for the current year with the report, as printed in the volume of Transactions for the previous year and that *all* the changes be carefully made.

A strict compliance with the instructions printed on the blank for report will avoid all difficulties.

Explanation.—The letters "mc" stand for "medical college"; the letters "cb" for "county board"; when the certificate is issued by the examining board of the county in the register of which it occurs,

the name of the county is omitted; when the certificate was issued by the examining board of some other county, the name of such county succeeds the abbreviation. The first name of every board of censors is that of the president of the board. The letters "ng" stand for non-graduate." "Diploma recorded" applies to a small number of doctors, who are exempt from criminal prosecution, but who are illegal doctors.

THE ROLL OF THE COUNTY MEDICAL SOCIETIES.

REVISION OF 1900.

AUTAUGA COUNTY MEDICAL SOCIETY—Selma, 1874.

OFFICERS.

President, Clarence Rice; Vice-President, M. D. Smith; Secretary, R. M. Davis; Treasurer, R. M. Davis; Health Officer, J. W. Hagler. Censors—C. A. Edwards, J. E. Wilkinson, M. D. Smith, Clarence Rice, R. M. Davis.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Davis, Robert Merritt, mc univ Tulane 95, cb 95, Prattville.
Edwards, Charles Alva, mc Memphis 49, cb 80, Prattville.
Hagler, John W., mc Alabama 94, cb Tuscaloosa 94, Prattville.
Marlar, A. J., mc —— —, cb —, Billingston, Ala.
Rice, Clarence, mc Alabama 95, cb 95, Prattville.
Smith, Malcolm Daniel, mc univ New York 91, cb Coosa 91, Prattville.
Wilkinson, John Edward, mc univ Tulane 68, cb 80, Prattville.
Total, 7.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Davis, John William, mc Atlanta 59, cb 80, Prattville.
Gibson, William Beatty, mc Bellevue 89, state board 92, Autaugaville.
Golson, Wyatt Washington, mc South Carolina 54, cb 84, Independence.
Golson, Robert Marion, mc univ Tennessee 94, cb 94, Independence.
Huddleston, Robert Lee, mc Alabama 80, cb 92, Wadsworth.
Total, 5.

Moved into the county—A. J. Marlar, from Chilton to Billingslea; R. L. Hudleston, from Elmore county to Wadsworth.

Moved out of the county—George A. Dennis to Montgomery.

Examinations—Henry C. Clements, mc Alabama 99, certificate granted.

BALDWIN COUNTY MEDICAL SOCIETY—Anniston, 1886.

OFFICERS.

President, V. McR. Showalter; Vice-President, C. L. Howe; Secretary, W. M. Lovelady; Treasurer, W. M. Lovelady; Health Officer, W. M. Lovelady. Censors—P. M. Hodgson, W. M. Lovelady, v. McR. Showalter, C. L. Howe, C. L. Mershon.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Hastie, J. Hamilton, mc ———, cb 1900, Stockton.
Hodgson, Phillip Melancthon, mc Alabama 88, cb 88, Stockton.
Holmes, Sibley, mc Alabama 96, cb 96, Tensaw.
Howe, Charles Lester, mc s of m Kentucky 93, cb 93, Magnolia.
Lovelady, William Marshall, mc ———, cb 86, Bon Secour.
Mershon, C. L., mc Iowa 98, cb 99, Fair Hope.
Showalter, Volney McReynolds, mc Alabama 90, cb 90, Point Clear.
Total, 7.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

M. Coghlan, Tensaw.
G. L. Lambert, Bay Minette.
T. A. Davis, Daphne.
Total, 3.

Moved into the county—T. A. Davis, from Mobile to Daphne.
Moved out of the county—J. D. Tramwell, to Lucedale, Miss.
Examinations—C. L. Mershon, mc Iowa 98, Fair hope.

BARBOUR COUNTY MEDICAL SOCIETY.—Eufaula, 1878.

OFFICERS.

President, W. P. Copeland; Vice-President, W. H. Robertson; Secretary, H. L. Brannon; Treasurer, W. G. Lewis; Health Officer, W. H. Robertson. Censors—H. L. Brannon, B. F. Bennett, W. P. Copeland, W. H. Robertson, J. J. Winn.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Battle, Junius Kincade, mc univ Louisiana 83, cb 83, Eufaula.
Bennett, Benjamin Franklin, mc Alabama 93, cb 93, Louisville.
Brannon, Henry Lee, mc univ Vanderbilt 85, cb 85, Eufaula.
Britt, Walter Stratton, mc Bellevue 98, cb Bullock 98, Eufaula.
Copeland, William Preston, mc Bellevue 70, cb 79, Eufaula.
Davie, Judson, mc Georgia 72, cb 81, Cowikee.
Haygood, John Waller, mc Alabama 98, cb Lowndes 98, Alston.

Houston, James LaFayette, mc Vanderbilt 98, cb 98, Harris.
Huey, George Washington, mc Alabama 91, cb Dale 97, Baker Hill.
Lewis, William Gabriel, mc Atlanta 84, cb Henry 84, Eufaula.
Mitchell, William Augustus, mc univ Louisiana 68, cb 86, Eufaula.
Patterson, Thomas, mc Atlanta 69, cb 82, Louisville.
Robertson, William Henry, mc Alabama 87, cb 87, Clayton.
Smart, William Alexander, mc Louisville 83, cb Coffee 83, Clayton.
Wallace, George Oscar, mc Alabama 91, cb 91, Clio.
White, Robert Lee, mc Alabama 98, state board 98, Mount Andrew.
Winn, James Julius, mc Atlanta 68, cb 81, Clayton.
Total, 17.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Borders, James Thomas, mc Atlanta Southern 85, cb 85, Louisville.
Faulk, Daniel Winston, ng, cb 84, Clio.
Gilbert, Andrew Jackson, mc Atlanta 89, cb Russell 89, Eufaula.
Goodwin, Albert, mc Louisville 73, cb 79, Eufaula.
Herron, Darrell Jefferson, mc Atlanta 83, cb 83, Louisville.
Lingo, John Henry, ng, state board 97, Alston.
McInnis, James A., mc Memphis Hospital 96, cb 99, Clio.
Mitchell, Thomas Snead, mc Atlanta 66, cb Lee 83, Eufaula.
Patterson, Robert B., mc Atlanta 99, cb 99, Louisville.
Pruett, Jacob Henry, mc univ New York 68, cb 79, Harris.
Wilson, Cato Hadras (col), mc Mehary 99, cb 99, Eufaula.
Total, 11.

Moved into the county—Walter Stratton Britt, from Midway, Bullock county, to Harris; Cato Hadras Wilson (col), from Greenville, Ga., to Eufaula.

Moved out of the county—J. T. Battle, from Hawkinsville to Highland Park, Montgomery county; Charles Lee Guice, from Harris to Gadsden, Etowah county; Benjamin Stewart Warren, from Clayton to Washington, D. C.; Walter Roy Weeden, from Eufaula to Opelika, Lee county.

Examinations—R. B. Patterson, mc Atlanta 99, certificate granted; C. H. Wilson (col), mc Mehary 99, certificate granted.

Deaths—Alexander Turner, mc South Carolina 57, of paralysis.

BALDWIN COUNTY MEDICAL SOCIETY—Anniston, 1886.

OFFICERS.

President, V. McR. Showalter; Vice-President, C. L. Howe; Secretary, W. M. Lovelady; Treasurer, W. M. Lovelady; Health Officer, W. M. Lovelady. Censors—P. M. Hodgson, W. M. Lovelady, v. McR. Showalter, C. L. Howe, C. L. Mershon.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Hastie, J. Hamilton, mc ———, cb 1900, Stockton.
Hodgson, Phillip Melancthon, mc Alabama 88, cb 88, Stockton.
Holmes, Sibley, mc Alabama 96, cb 96, Tensaw.
Howe, Charles Lester, mc s of m Kentucky 93, cb 93, Magnolia.
Lovelady, William Marshall, mc ———, cb 86, Bon Secour.
Mershon, C. L., mc Iowa 98, cb 99, Fair Hope.
Showalter, Volney McReynolds, mc Alabama 90, cb 90, Point Clear.
Total, 7.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

M. Coghlan, Tensaw.
G. L. Lambert, Bay Minette.
T. A. Davis, Daphne.
Total, 3.

Moved into the county—T. A. Davis, from Mobile to Daphne.
Moved out of the county—J. D. Tramwell, to Lucedale, Miss.
Examinations—C. L. Mershon, mc Iowa 98, Fair hope.

BARBOUR COUNTY MEDICAL SOCIETY.—Eufaula, 1878.

OFFICERS.

President, W. P. Copeland; Vice-President, W. H. Robertson; Secretary, H. L. Brannon; Treasurer, W. G. Lewis; Health Officer, W. H. Robertson. Censors—H. L. Brannon, B. F. Bennett, W. P. Copeland, W. H. Robertson, J. J. Winn.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Battle, Junius Kincade, mc univ Louisiana 83, cb 83, Eufaula.
Bennett, Benjamin Franklin, mc Alabama 93, cb 93, Louisville.
Brannon, Henry Lee, mc univ Vanderbilt 85, cb 85, Eufaula.
Britt, Walter Stratton, mc Bellevue 98, cb Bullock 98, Eufaula.
Copeland, William Preston, mc Bellevue 70, cb 79, Eufaula.
Davie, Judson, mc Georgia 72, cb 81, Cowikee.
Haygood, John Waller, mc Alabama 98, cb Lowndes 98, Alston.

Houston, James LaFayette, mc Vanderbilt 98, cb 98, Harris.
Huey, George Washington, mc Alabama 91, cb Dale 97, Baker Hill.
Lewis, William Gabriel, mc Atlanta 84, cb Henry 84, Eufaula.
Mitchell, William Augustus, mc univ Louisiana 68, cb 86, Eufaula.
Patterson, Thomas, mc Atlanta 69, cb 82, Louisville.
Robertson, William Henry, mc Alabama 87, cb 87, Clayton.
Smart, William Alexander, mc Louisville 83, cb Coffee 83, Clayton.
Wallace, George Oscar, mc Alabama 91, cb 91, Clio.
White, Robert Lee, mc Alabama 98, state board 98, Mount Andrew.
Winn, James Julius, mc Atlanta 68, cb 81, Clayton.
Total, 17.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Borders, James Thomas, mc Atlanta Southern 85, cb 85, Louisville.
Faulk, Daniel Winston, ng, cb 84, Clio.
Gilbert, Andrew Jackson, mc Atlanta 89, cb Russell 89, Eufaula.
Goodwin, Albert, mc Louisville 73, cb 79, Eufaula.
Herron, Darrell Jefferson, mc Atlanta 83, cb 83, Louisville.
Lingo, John Henry, ng, state board 97, Alston.
McInnis, James A., mc Memphis Hospital 96, cb 99, Clio.
Mitchell, Thomas Snead, mc Atlanta 66, cb Lee 83, Eufaula.
Patterson, Robert B., mc Atlanta 99, cb 99, Louisville.
Pruett, Jacob Henry, mc univ New York 68, cb 79, Harris.
Wilson, Cato Hadras (col), mc Mehary 99, cb 99, Eufaula.
Total, 11.

Moved into the county—Walter Stratton Britt, from Midway, Bullock county, to Harris; Cato Hadras Wilson (col), from Greenville, Ga., to Eufaula.

Moved out of the county—J. T. Battle, from Hawkinsville to Highland Park, Montgomery county; Charles Lee Guice, from Harris to Gadsden, Etowah county; Benjamin Stewart Warren, from Clayton to Washington, D. C.; Walter Roy Weeden, from Eufaula to Opelika, Lee county.

Examinations—R. B. Patterson, mc Atlanta 99, certificate granted; C. H. Wilson (col), mc Mehary 99, certificate granted.

Deaths—Alexander Turner, mc South Carolina 57, of paralysis.

BIBB COUNTY MEDICAL SOCIETY—Montgomery, 1875.

OFFICERS.

President, M. C. Schoolar; Vice-President, W. H. Bell; Secretary, A. E. Meadow; Treasurer, T. E. Schoolar; Health Officer, E. L. Peacock. Censors—A. E. Meadow, L. E. Peacock, T. E. Schoolar, J. F. Curtis, W. H. Bell.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bell, Walter Howard, mc Atlanta 88, cb Calhoun 88, Hargrove.
Campbell, Charles Monroe, mc univ Tennessee 94, cb 94, Scottsville.
Curtis, Joseph Franklin, mc Alabama 93, cb Shelby 93, Blocton.
Jones, John Wesley, mc ———, cb —, Randolph.
Jones, Rufus C., mc Montezuma 98, cb Shelby 98, Woodstock.
Krout, Charles Franklin, mc Alabama 95, cb 95, Pondville.
Meadow, Albert Eli, mc Pulte 83, cb Jefferson 83, Blocton.
Moseley, David Orian, mc Washington 72, cb Perry 78, Centreville.
Nicholson, William John, mc univ Vanderbilt 84, cb 86, Centreville.
Peacock, Edward Lovick, mc Alabama 92, cb Marengo 92, Blocton.
Schoolar, Milton Carson, mc Alabama 87, cb 87, Centreville.
Schoolar, Thornly Edward, mc univ Vanderbilt 92, cb 92, Centreville.
Thomas, M. C., mc univ Tulane 99, cb 99, Blocton.
Trigg, Allen Warren, mc Alabama 81, cb Tuscaloosa 81, Blocton.
Whitfield, Oscar, mc Tennessee 80, cb 80, Briarfield.
Woolley, Charles Lewis, old law 69, cb Perry 79, Randolph.
Total, 16.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Adams, J. Bird, mc Alabama 97, cb 97, Lawley.
Miller, J. T., mc univ Vanderbilt 86, cb Pickens 86, Lopez.
Ray, Jacob Usry, old law 59, cb Tuscaloosa 82, Woodstock.
Sellers, Edward M., mc Alabama 97, cb 97, Randolph.
Stewart, Charles Jefferson, mc Alabama 91, cb 91, Abercrombie.
Williams, James Welford, mc Georgia 39, cb 79, Centreville.
Total, 6.

Illegal—Jackson S. Cleveland, Randolph, moved to Perry county; George Martin, Giles.
Total, 2.

Moved into the county—M. C. Thomas, from ——— to Blocton.

Moved out of the county—M. S. Davie, from Centreville to Dothan, Henry county; Percy I. Hopkins, from Lopez to Bessemer, Jefferson county; Thomas Abram Knighton, from Centreville to York, Sumter county; Edward M. Sellers, from Randolph to Brookwood, Tuscaloosa county; Charles Jefferson Stewart, from Abercrombie to Jericho, Perry county; George H. Waller, from Lopez to Bessemer Jefferson county.

Examinations—M. S. Davie, mc Tulane 99, certificate granted; Percy I. Hopkins, mc univ Vanderbilt 99, certificate granted; M. C. Thomas, mc Tulane 99, certificate granted; George H. Waller, mc univ Vanderbilt 99, certificate granted.

*BLOUNT COUNTY MEDICAL SOCIETY—Mobile, 1876.

OFFICERS.

President, F. N. Hudson; Vice-President, P. M. Baker; Secretary, F. A. Gillespie; Treasurer, F. A. Gillespie; Health Officer, F. N. Hudson. Censors—F. N. Hudson, G. W. Self, W. T. Bains, J. L. Rains, F. A. Gillespie.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bains, William Thomas, mc univ Vanderbilt 88, cb 88, Cleveland.
Baker, Peter Matthews, mc Atlanta Southern 92, cb 92, Snead.
Clapp, William King, old law, ng, Gum Springs.
Cox, E. S. W., mc univ Tennessee 93, cb 93, Bangor.
Finley, William McLaughlin, mc univ Vanderbilt 79, cb 84, Blountsville.
Gillespie, Felix Augustus, mc Alabama 89, cb 89, Hanceville.
Hudson, Frank Norton, mc univ Vanderbilt 74, cb 76, Blountsville.
Mitchell, Henry Eugene, mc univ Vanderbilt 93, cb 93, Oneonta.
Moore, David Sanders, mc Atlanta 80, cb 80, Clarence.
Rains, John Leonidas, mc univ Vanderbilt 91, cb Marshall 91, Liberty.
Self, George Washington, mc univ Tennessee 89, cb 89, Selfville.
Total, 11.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Allgood, William Benton, mc Atlanta Southern 78, cb 78, Chepultepec.
Aldridge, Patrick George, mc Atlanta 76, cb 79, Brooksville.
Armstrong, Jesse Isham, mc Chattanooga 93, cb 93, Blount Springs.
Davidson, Alvin Steel, ng, cb 71, Selfville.
Donahoo, Floyd George, mc Atlanta Southern 81, cb —, Oneonta.
Haden, Andrew Wade, mc univ Vanderbilt 82, cb 82, Summit.

Haden, Henry Hughes, mc univ Vanderbilt 86, cb 86, Summit.
Harwell, James Thomas, mc Atlanta Southern 83, cb Cullman 87, Compton.
Hinds, W. T., mc —, cb —, Summit.
Martin, Henry B., mc Atlanta Southern 88, cb 88, Arkadelphia.
McPherson, George Willis, mc univ Tennessee 87, cb Cullman 87, Country.
Roseman, William Lucius, mc s of m Kentucky 92, cb Walker 93, Arkadelphia.
Whaley, Peter, old law, ng, cb 77, Hanceville.
Total, 13.

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*NOTE.—As no report has been received from Blount county this year, the report for 1899 is here reproduced.

BULLOCK COUNTY MEDICAL SOCIETY—Selma, 1879.

OFFICERS.

President, Seale Harris; Vice-President, F. P. Hixon; Secretary, C. M. Franklin; Treasurer, S. C. Cowan; Health Officer, Seale Harris. Censors—C. H. Franklin, Seale Harris, R. H. Hayes, S. C. Cowan, H. M. Hunter.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Beasley, James William, mc Alabama 96, cb Pike 96, Mount Hilliard.
Butt, Richard Lemuel, mc univ New York 46, cb 80, Midway.
Baldwin, James Crews, mc Richmond 94, cb Macon 94, Midway.
Cowan, Samuel Colvin, mc Alabama 89, cb 89, Union Springs.
Crymes, Augustus Clayton, mc Jefferson 56, cb 80, Midway.
Darnell, Benjamin Franklin, mc Atlanta 55, cb 83, Fitzpatrick.
Dean, T. Joseph, mc Louisville 94, cb Chambers 94, Union Springs.
Eidson, James Thomas, mc Alabama 94, cb 94, Fitzpatrick.
Franklin, Charles Higgs, mc Louisiana 66, cb 80, Union Springs.
Franklin, Charles Moore, mc phys and surg New York 98, cb 98, Union Springs.
Harris, Seale, mc univ Virginia 94, cb 94, Union Springs.
Harris, Thomas Peyton, mc univ Vanderbilt 94, cb 94, Inverness.
Hayes, Robert Hughes, mc St. Louis 79, cb 80, Union Springs.
Hixon, Frank Petty, mc univ Vanderbilt 98, cb 98, Perote.
Hunter, Henry Mitchell, mc phy and surg Baltimore 86, cb Barbour 87, Union Springs.
Reynolds, William Henderson, mc Alabama 85, cb 85, Union Springs.
Sessions, Llewellen, mc Georgia 48, cb 87, Union Springs.

Thomason, William Bartlett, mc Georgia 54, cb 80, Aberfoil.
Walker, William Austin, mc Jefferson 54, cb 80, Perote.
Total, 19.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Alexander, George William Allen (col), mc Meharry 99, cb Russell 99, Union Springs.
Total, 1.

Moved into the county—James Crews Baldwin, from Macon county to Midway.

Moved out of the county—Walter Stratton Britt, from Midway to Eufaula; William Henry Harrison, from Aberfoil to Randolph county.

BUTLER COUNTY MEDICAL SOCIETY—Montgomery, 1875.

OFFICERS.

President, W. W. Mangum; Vice-President, R. E. Smith; Secretary, T. D. Stallings; Treasurer, T. D. Stallings; Health Officer, J. C. Kendrick. Censors—W. W. Mangum, E. G. Donald, J. C. Kendrick, J. A. Kendrick, T. D. Stallings.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Allman, James Edward, mc Savannah 69, cb 79, Georgiana.
Broughton, John Thomas, mc univ Pennsylvania 52, cb 79, Greenville.
Brown, William Abner, mc St. Louis 84, cb Tuscaloosa 86, Garland.
Donald, Erskine Grier, mc Alabama 93, cb 93, Monterey.
Garrett, James Jefferson, mc Georgia Reform 82, cb 82, Forest Home.
Green, Henry, mc Alabama 92, cb Conecuh 92, Bolling.
Grissett, William Paners, mc Alabama 72, cb Monroe 84, Garland.
Kendrick, Joel Cloud, mc univ Nashville 52, cb 78, Greenville.
Kendrick, John Aaron, mc Tulane 94, cb 94, Greenville.
Mangum, William Weightman, mc Atlanta 93, cb 93, Georgiana.
McCane, James Jordan, mc Tulane 82, cb 82, Glasgow.
Morris, William Eli, mc Alabama 97, cb Conecuh 97, Shell.
Perdue, James Lewis, mc Alabama 75, cb 79, Greenville.
Saunders, Herbert Frank, mc Tulane 97, cb 97, Greenville.
Smith, Robert Edward, mc Alabama 82, cb 83, Greenville.
Stallings, Thomas Daniel, mc Alabama 89, cb Lowndes 89, Greenville.
Thagard, Robert Albert, mc Tulane 97, cb 97, Greenville.
Wall, Richard Albert, mc Tulane 94, cb 94, Forest Home.
Watson, James Crawford, mc Alabama 98, cb 98, Georgiana.
Total, 19.

Moved into the county—Herbert Frank Saunders, from Mobile to Greenville; Richard Albert Wall, from Ackerville, Wilcox county, to Forest Home.

Moved out of the county—Henry Gaither Perry, from Greenville to Greensboro, Hale county.

CALHOUN COUNTY MEDICAL SOCIETY—Montgomery, 1881.

OFFICERS.

President—E. C. Anderson; Vice-President, J. F. Walker; Secretary, A. A. Greene; Treasurer, E. C. Anderson; Health Officer, J. M. Whitesides. Censors—W. A. Smith, W. B. Arbery, J. M. Whitesides, J. F. Walker, W. H. Kinnebrew.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Anderson, Edmonds Clack, mc Kentucky s of m 77, cb 85, Anniston.
Arberry, William Buchanan, mc univ Vanderbilt 82, cb Macon 82, Jacksonville.
Ayers, Thomas Wilborn, mc phy and surg Baltimore 86, cb 86, Anniston.
Bell, Alse Wilson, mc Alabama 97, cb Shelby 97, Weavers.
Bowcock, Robert Lee, mc univ Virginia 86, cb 88, Anniston.
Brock, Jefferson C., mc univ Vanderbilt 84, cb Randolph 84, Anniston.
Brothers, Phillip Houston, ng, old law, 41, cb 86, Zula.
Davis, John Francis Marion, mc Atlanta 60, cb 80, Choccolocco.
Douthit, Andrew Jackson, ng, old law, cb 81, Alexandria.
Gordon, Frederick Elliot, mc Alabama 82, cb Marengo 82, Anniston.
Greene, Allen Augustus, mc univ Vanderbilt 91, cb Chilton 91, Anniston.
Huger, Richard Proctor, mc South Carolina 71, cb 81, Anniston.
Hughes, Robert Lee, mc Atlanta 92, cb 92, Choccolocco.
Kelly, John Baker, mc Jefferson 59, cb Coosa 84, Anniston.
Kinnebrew, William Henry, mc univ New York 78, cb 83, Piedmont.
Ligon, Arthur Wellington, mc univ Vanderbilt 83, cb Cleburne 84, Oxford.
Mathews, George Andrew, mc univ Michigan 66, cb 80, Anniston.
Moon, Edward Kimbrough, mc Grant univ Chattanooga 92, cb Marshall 92, Anniston.
Smith, William Armistead, mc Alabama 81, cb Monroe 81, Anniston.
Steele, Abner Newton, mc Alabama 90, cb Pickens 90, Anniston.
Taylor, James Ratchford, mc Atlanta 80, cb Clay 98, Anniston.

Walker, James Fleming, mc univ Louisville 92, cb 92, Anniston.
Whitesides, John McIntyre, mc univ Vanderbilt 84, cb 84, Oxford.
Total, 23.

Honorary Members.

Robertson, Thaddeus Lindley, mc Jefferson 61, cb 81, Birmingham.
Warren, William James, mc Atlanta 89, cb Tallapoosa 89, Anniston.
Wikle, Jessie Lane, (Druggist), mc Georgia 71, cb 81, Anniston.
Williams, Genaboth Cape, ng, 81, White Plains.
Total, 4.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Buckalew, Frederick Woodhull, mc univ Grant 93, cb 95, DeArmanville.
Bullard, Aurelius Francis, ng, cb 81, Oxford.
Chapman, George Lyman, mc Atlanta 97, cb 98, Alexandria.
Crook, John E., mc Vanderbilt —, cb 81, Jacksonville.
Hudson, T. H., mc Mobile —, cb —, DeArmanville.
Hughes, John Leander, mc Georgia 51, cb 83, Piedmont.
Linder, Phillip Pleasant, ng, cb 81, Jacksonville.
McCurry, Samuel Josephus, mc Atlanta 80, cb Cherokee 81, Anniston.
Sanders, Andrew J., ———, cb Chambers —, Ohatchee.
Thomas, Charles E., (col), mc Long Island Hospital 90, cb 90, Anniston.
Turner, William M., mc Alabama 92, cb St. Clair 92, Anniston.
Teague, Francis Bowden, mc univ Tennessee 80, cb Etowah 80, Piedmont.
Vann, Paul D., mc Alabama 96, cb DeKalb 96, Anniston.
Williams, Benjamin Dudley, mc univ Louisville —, cb 87, Oxford.
Williamson, Thomas, ng, cb 84, Peeks Hill.
Whiteside, J. W., mc Alabama 96, cb 96, White Plains.
Total, 16.

Moved into the county—Edward Kimbrough Moon, from Marshall county to Anniston; Abner Newton Steele, from Columbus, Miss., to Anniston; James Ratchford Taylor, from Estaboga to Anniston.

Moved out of the county—James M. White, from Anniston, to York Station.

Deaths—William Worth Little, mc univ Vanderbilt 82, cb 82, Piedmont.

CHAMBERS COUNTY MEDICAL SOCIETY—Montgomery, 1881.

OFFICERS.

President, Z. T. Grady; Vice President, W. J. Love: Secretary, W. D. Gaines; Treasurer, W. D. Gaines; Health Officer, W. M. Gay. Censors—W. D. Gaines, W. H. Hudson, W. J. Love, T. H. Bonner, T. H. Haralson.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES

Bonner, Thomas Hamilton, mc Southern 84, cb Randolph 84, Hickory Flat.
Gaines, William D., mc Alabama 92, cb 92, LaFayette.
Gay, William M., mc Southern —, cb Randolph —, Penton.
Grady, Zachary Taylor, mc Atlanta 80, cb 81, LaFayette.
Finley, Emmett M., mc Southern 96, cb 96, Fredonia.
Haralson, Thomas H., mc Memphis Hospital 99, cb 99, Cusseta.
Hilt, John Leonard, mc Southern 89, Jefferson 89, Five Points.
Hudson, William Henry, mc Atlanta 86, cb 86, LaFayette.
Ison, Josiah Allen, mc Southern 87, cb Tallapoosa 87, Wise.
Liles, John P., mc Birmingham 98, cb 98, Mill Town.
Love, William Joseph, mc Atlanta 82, cb Lee 85, LaFayette.
Newman, Samuel Harris, mc Memphis Hospital 98, cb 98, West Point, Ga.
Rutland, John Blake, mc Atlanta 80, cb 82, West Point, Ga.
Thompson, James F., mc univ Georgia —, cb 98, Langdale.
Total, 14.

Honorary Members.

Griggs, Asa Wesley, mc univ Nashville 55, cb 82, West Point, Ga.
Rea, Benjamin Franklin, Sr., mc Jefferson 42, cb 82, LaFayette.
Smith, Lawrence, mc Georgia 52, cb 82, Cusseta.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Carmichael, Lawrence Greer, mc Graffenburg 57, cb 82, Strand.
Chambers, —— ——, —— —, cb 96, Langdale.
Coleman, Hiram F., mc Southern —, cb —, Strand.
Davis, James Lawson, mc Alabama —, cb 82, LaFayette.
DeVaughan, John Wesley, mc Vanderbilt 83, cb 83, Mill Town.
Grady, J. Lorenzo, mc Atlanta 95, cb 95, Fredonia.
Hamner, Lovic Pierce, mc ——— —, cb Randolph 82, Five Points.
Hodges, Wyatt T., mc Alabama 92, cb 97, River View.

Millford, H. H., mc ——— —, cb Lee —, Five Points.
Striplin, ——, mc ——— —, cb —, Fredonia.
Total, 10.

Examinations—Thomas H. Haralson, mc Memphis 99, certificate granted; H. Leonard McClendon, mc univ South, Sewanee 1900, certificate granted.

CHEROKEE COUNTY MEDICAL SOCIETY—Tuscaloosa, 1887.

OFFICERS.

President—H. L. Ison; Vice-President, T. G. Miller; Secretary, R. L. McWhorter; Treasurer, A. C. Shamblin; Health Officer, H. L. Appleton. Censors—A. C. Shamblin, H. L. Appleton, H. L. Ison, S. C. Tatum, R. L. McWhorter.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Appleton, Hugh Lowndes, mc univ Vanderbilt 92, cb 92, Center.
Elliott, Theoderic Miles, mc s of m Kentucky 76, cb 87, Grassland.
Farill, John Paul, mc Atlanta 81, cb 87, Farill.
Ison, Hartford Lee, mc Southern 91, cb Tallapoosa 91. Center.
McGhee, Robert Hallens, mc univ Vanderbilt 87, cb 87, Round Mount.
McWhorter, Robert Lee, mc Alabama 87, cb 87, Gaylesville.
Miller, Thomas Gideon, mc s of m Kentucky 86, cb 86, Gaylesvile.
Mitchell, Julius Shuford, mc univ Vanderbilt 94, cb Montgomery 98, Fullerton.
Shamblin, Arthur C., mc Chattanooga 92, cb 94, Broomtown.
Stubbs, William Lee, mc Alabama 99, cb 99, Cedar Bluff.
Tatum, Samuel Carter, mc univ Vanderbilt 93, cb 93, Center.
Total, 11.

Honorary Members.

Farill, John Washington, ng, old law, cb 87, Farill.
Shamblin, Arnold, ng, old law, cb 87, Broomtown.
Total, 2.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Bomar, Richard Ritter, mc Atlanta Southern 85, cb 85, Bomar.
Brown, A. M., mc ———, cb 87, Round Mountain.
Cook, Edward Augustus, mc univ Vanderbilt 84, cb 84, Kirks Grove.
Crumpton, W. H., mc Chattanooga —, cb Cleburne 97, Alexis.
Emerson, J. Forrest, mc Chattanooga 95, cb Marshall 98, Rock Run
Jones, H. S., mc Atlanta —, cb 99, Moshat.
Matthews, John Patrick, mc univ Nashville 86, cb 87, Maple Grove.

Morgan, W. T., mc univ Vanderbilt 92, Calhoun 96, Rock Run.
Shamblin, John Louis, mc Atlanta 88, cb 88, Broomtown.
Sharp, George Barnabas, mc Atlanta Southern 93, cb 93, Forney.
Slack, John C., mc ———, cb 87, Slackland.
Story, C., ng, cb 86, Key.
White, Thomas Noel, mc univ Georgia 57, cb 87, Spring Garden.
White, William Yancy, mc univ Vanderbilt 87, cb 87, Spring Garden.
Wills, ——, illegal.
Wright, Luther, mc Atlanta Southern 98, cb 98, Forney.
Total, 16.

Moved into the county—J. Forrest Emerson, from Marshall county to Rock Run Station.

Moved out of the county—William Clement Darnall, from Center to Huntsville, Madison county.

Examinations—William Lee Stubbs, (no data), certificate granted.

*CHILTON COUNTY MEDICAL SOCIETY—Selma, 1879.

OFFICERS.

President, W. E. Stewart; Vice-President, E. A. Matthews; Secretary, D. A. Campbell; Treasurer, ————; Health Officer, ————.
Censors—W. E. Stewart, E. A. Matthews, D. A. Campbell.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Caffey, Hugh William, mc South Carolina 55, cb Lowndes 83, Verbena.
Campbell, David A., univ Louisville —, cb 98, Clanton.
Claughton, Alza B., mc Atlanta —, cb —, Maplesville.
Dawson, George Washington, mc Alabama 94, cb 94, Verbena.
Jonson, Joseph Samuel, mc Baltimore 76, cb 86, Clanton.
Lane, Kenneth Fountain, mc Atlanta —, cb 98, Jemison.
Matthews, Emmet Abram, mc Alabama 87, state board 86, Clanton.
McNeil, R. Berney, mc Birmingham 98, cb 98, Jemison.
Parnell, Charles Nickols, mc Alabama 91, cb 91, Stanton.
Stewart, William Eugene, mc Louisville 75, cb 79, Clanton.
Wise, William Tell, mc Atlanta 89, cb 94, Coopers.
Total, 11.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Dawson, James Jefferson (old law), cb Autauga 56, Verbena.
Hayes, Julius Poe, mc Memphis 96, cb 96, Jemison.

Johnson, Joseph Samuel, Sr., mc Georgia 59, cb Dallas 79, Clanton.
Pitts, John Spate, mc Nashville 68, cb 79, Verbena.
Wise, John F., mc Graffenburg 56, cb 79, Coopers.
Total, 5.

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*NOTE.—As no report has been received from Chilton county this year, the report of 1899 is here reproduced.

CHOCTAW COUNTY MEDICAL SOCIETY—Selma, 1879.

OFFICERS.

President, T. R. Lenoir; Vice-President, J. C. Christopher; Secretary, J. L. Granberry; Treasurer, J. L. Granberry; Health Officer, J. L. Granberry. Censors—R. F. Moody, F. E. Christopher, W. F. Kimbrough.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Alman, Samuel, mc Louisville 99, cb 99, Melvin.
Clarke, Ferdinand Payne, mc Alabama 84, cb Marengo 84, Bevill.
Christopher, John C., mc Louisville 94, cb 94, DeSotoville.
Christopher, Frank Evans, mc Louisville 94, cb 94, Isney.
Granberry, Joseph Langley, mc Louisville 91, cb 91, Pushmataha.
Johnson, Samuel F., ng, Butler.
Lenoir, Thomas R., mc Alabama 92, cb 92, Womack Hill.
Moody, Robert Franklin, mc univ Louisiana 60, cb 79, Butler.
Needham, Eli Wigginton, mc univ Louisiana 58, cb 79, Lusk.
Phillips, Jacob Parker, mc Alabama 85, cb 85, Yantley.
Young, Robert Lee, mc Alabama 86, cb Marengo 88, Mount Sterling.
Kimbrough, Wm. F., mc Alabama —, cb —, Pushmataha.
Total, 12.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Brown, Collin Balsam, mc ——, cb—, Cocoa.
McCall, Daniel T., mc Louisville 94, cb —, Butler.
Turner, Mathew, mc ——, cb —, Bladon Springs.
Examinations—John H. Hendrix, (no data), certificate granted.

*CLARKE COUNTY MEDICAL SOCIETY—Greenville, 1885.

OFFICERS.

President, W. A. Kimbrough; Vice President, L. O. Hicks; Secretary, C. E. Pugh; Treasurer, J. T. Pugh; Health Officer, G. S. Chapman. Censors—G. S. Chapman, J. W. Fleming, B. Boroughs, J. A. Gilmore, J. G. Jeffrey.

Smith, James Clark, mc univ Vanderbilt 85, cb Elmore 85, Tuscumbia
Williams, Charles W., mc ——, cb —, Cherokee.
Total, 10.

Moved out of the county—John Thomas Masterson, from Leighton to Moulton, Lawrence county; J. D. McClellan, from Spring Valley to Jefferson county.

CONECUH COUNTY MEDICAL SOCIETY—Selma, 1879.

OFFICERS.

President, E. L. Stallworth; Vice-President, H. T. Fountain; Secretary, Andrew Jay; Treasurer, Andrew Jay; Health Officer, E. L. Stallworth. Censors—E. L. Stallworth, P. M. Bruner, A. Jay, A. A. McKittrick, R. T. Holland.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Betts, William Frank, mc univ Louisville 93, cb Monroe 95, Evergreen.
Bruner, Pinkney McDonald, mc Alabama 61, cb Lowndes 79, Evergreen.
Bradley, Ely, mc univ Pennsylvania 59, cb 84, Repton.
Fountain, Hugh Thomas, mc Alabama 72, Monroe 79, Burnt Corn.
Holland, Richard Thomas, mc Alabama 90, cb Escambia 90, Castleberry.
Jay, Andrew, mc Alabama 72, cb 84, Evergreen.
McCreary, James Absalom, mc univ Louisiana 60, cb 84, Evergreen.
McKittrick, Adam Alexander, mc Georgia 60, cb 84, Evergreen.
Mixon, John Nelson, mc univ Louisville 99, cb 99, Commerce.
Rubach, Carl, mc Memphis 96, cb 96, Evergreen.
Shaver, William Benjamin, mc Georgia Reform 60, cb 84, Herbert.
Snead, Julius Charlesworth, mc univ Tulane 96, state board 96, Brooklyn.
Stallworth, Emmet Lemuel, mc Alabama 94, cb 94, Evergreen.
Taliaferro, Charles Thomas, mc Atlanta 59, cb 84, Evergreen.
Tatum, Fletcher Lothair, mc Atlanta 95, cb Pike 95, Brooklyn.
Watson, William, mc Alabama 93, cb 93, Repton.
Total, 16.

Honorary Members.

Belo, Arthur Frederic, mc Jefferson 70, cb —, Evergreen.
Total, 1.

Moved into the county—William Franklin Betts, from Burnt Corn, Monroe county, to Evergreen; H. W. Ilderton, from Charleston, S. C., to Bellville.

Moved out of the county—H. W. Ilderton, from Bellville to parts unknown; Marcellus McCreary, from Evergreen to Pensacola, Fla.; J. T. Russell, from Evergreen to Monroeville; T. M. McMillan, from Brooklyn to Monroeville.

COOSA COUNTY MEDICAL SOCIETY—Birmingham, 1883.

OFFICERS.

President, A. J. Peterson; Vice-President, W. J. Peddy; Secretary, J. Jones; Treasurer, E. Argo; Health Officer, J. W. Pruett. Censors—J. Jones, A. J. Peterson, E. Argo, J. C. Cousin, W. J. Peddy.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Argo, Eugene, mc univ Vanderbilt 91, cb 91, Goodwater.
Cousins, James Columbus, mc univ Maryland 91, cb 91, Equality.
Dunlap, William B., ng, cb 85, Hollins.
Grimes, John W., mc Sewanee 99, cb 99, Juniata.
Holloway, William A., mc Alabama 89, cb Tallapoosa 89, Kellyton.
Jones, Julius, mc Vanderbilt 84, cb 84, Rockford.
McKinny, Eugene P., mc univ Louisville 93, cb 93, Kellyton.
Moon, William Henry, mc Alabama 79, cb 83, Goodwater.
Nolen, Richard Spencer, mc Kentucky s of m 89, cb 89, Equality.
Peddy, William Jeremiah, mc Graffenburg 55, cb 83, Rockford.
Peterson, Albert James, mc Vanderbilt 89, cb 89, Hanover.
Pruett, James W., mc Alabama 92, cb Tallapoosa 92, Weogufka.
Total, 12.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Dollar, Henry Clay, mc Atlanta 75, cb 83, Marble Valley.
Mathews, John Thomas, mc univ Tulane 73, cb 84, Hanover.
Maxwell, Cecil Kelly, mc Alabama 92, cb 92, Kellyton.
Salter, Paschal Preston, (botanist), cb 84, Goodwater.
White, William Tanner, mc univ Tennessee 86, cb 86, Rockford.
Total, 5.

Moved out of the county—Chandler Matthew Pope, from Goodwater to Henry Ellen, Jefferson county; Phillip Peterson Goggans, from Travellers Rest to Texas.

Examinations—Bushrod Foley Laird, mc Ohio 74, certificate granted.

Deaths—William Bailey, ng, February, 1900, age 78, of chronic diarrhœa.

*COVINGTON COUNTY MEDICAL SOCIETY—Montgomery, 1888.

OFFICERS.

President, W. E. Sentell; Vice-President, J. R. Ealum; Secretary, W. M. McNair; Treasurer, J. R. Ealum; Health Officer, W. N. McNair. Censors—W. E. Sentell, J. R. Ealum, T. C. Bozeman, W. T. Stenson, W. N. McNair.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bozeman, T. Compton, mc Alabama 92, cb 93, Searight.
Ealum, James R., mc Alabama 91, cb 91, Oakey Streak.
McNair, William Neil, mc Alabama 90, cb 91, River Falls.
Sentell, Wilbur Eugene, mc Alabama 89, cb 91, Andalusia.
Stenson, William T., mc Atlanta 91, cb 91, Rose Hill.
Street, William N., mc ——— —, cb —, Hilton.
Total, 6.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Atkinson, Alexander G., ng, Red Level.
Baggett, ———, mc ——— —, cb —, Eclectic.
Brown, T. J., (illegal), Rat.
Cawthorn, Samuel J. S., ng, cb 90, Andalusia.
Patrick, Thomas, ng, Green Bay.
Miller, ———, (illegal), Florella.
Pierson, W. W., (illegal), Red Level.
Roberts, James M., ng, Beda.
Sellers, Thomas L., ng, Andalusia.
Whaley, James A., ng, Green Bay.
Total, 10.

NOTE.—As no report has been received from Covington county this year, the report of 1896 is here reproduced.

*CRENSHAW COUNTY MEDICAL SOCIETY—Mobile, 1882.

OFFICERS.

President, J. R. Horn; Vice-President, F. M. T. Tankersley; Secretary, C. R. Rushton; Treasurer, C. R. Rushton; Health Officer, G.

S. Tankersley. Censors—J. R. Horn, F. M. T. Tankersley, C. R. Rushton, S. W. May, A. J. Jones.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Avant, William Watts, mc univ Tennessee 90, no certificate, Patsburg.

Broughton, Louis Edward, mc univ Tulane 93, cb Butler 93, Searight.

Burgamy, William Thomas, mc Jefferson 59, cb 88, Rutledge.

Coston, William Henry, mc Atlanta Southern 88, and New Orleans 94, cb 89, Brantley.

Horn, Joseph Robert, mc Alabama 87, cb 87, Luverne.

Horn, Richard Kersey, mc Electric of Georgia 81, cb 84, Bullock.

Jones, Andrew Jackson, mc s of m Kentucky 85, cb 86, Highland Home.

Kendrick, James Evans, mc Alabama 69, cb 82, Luverne.

Knight, William Peter, mc Atlanta Southern 92, and New Orleans 84, cb Butler 92, Luverne.

May, Samuel William, mc phy and surg Baltimore 82, and New York Pol. 95, cb 83, Brantley.

Odom, William F., mc univ Tennessee 94, cb Coffee 94, Johnson.

Rushton, Christopher Reid, mc Atlanta Southern 92, cb Covington 92, Rutledge.

Sheppard, Charles Webb, mc Atlanta Southern 91, cb Butler 91, Honoraville.

Stough, Thomas Jefferson, mc univ Tennessee 93, cb 93, Petrey.

Tankersley, Felix Marcus Tullius, mc univ Tennessee 85, and Tulane 95, cb 85, Highland Home.

Tankersley, George Stewart, mc univ Tulane 93, cb 93, LaPine.

Thrower, Steven Simon, ng, cb 84, Bradleyton.

Total, 17.

Honorary Members.

Williamson, George Washington, mc Alabama 93, cb Crenshaw 93, Goshen.

Total, 1.

Dr. Williamson lives at Goshen, which is in Pike county, near the line of Crenshaw, but nearer to Luverne than to Troy, and is more convenient to Luverne, consequently attends the meetings of the Crenshaw county board and is an honorary member with all the rights and privileges of a regular member.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Bozeman, T. C., mc Alabama 92, cb Covington 92, Searight.
Dyer, Edward Fox, ng, cb 84, Rutledge.
Eiland, Thomas C., mc Birmingham 98, cb 98, Bullock.
Ford, Julian, mc ——— —, cb Pike —, Bradleyton.
Moxley, David Newton, ng, cb Pike 78, Glenwood.
Pryor, William Dayton, mc univ Nashville 57, cb Butler 81, Aiken.
Ray, Thomas Quincy, mc Atlanta Southern 94, cb 84, Dozier.
Richardson, Roddie, mc univ Tennessee 98, cb 98, Saville.
Total, 8.

*NOTE.—As no report has been received from Crenshaw county this year, the report for 1899 is here reproduced.

CULLMAN COUNTY MEDICAL SOCIETY—Anniston, 1886.

OFFICERS.

President, G. Hartung; Vice-President, G. W. Watts; Secretary Recording, M. S. Johnson; Treasurer, G. Hartung; Health Officer, John Yeilding. Censors—G. Hartung, R. H. Baird, G. W. Watts, W. H. Price, John Yielding.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Ainsley, John Smith, mc Atlanta 76, cb Lowndes 78, Trimble.
Baird, Robert Henry, mc Alabama 92, cb Blount 92, Cullman.
Brindley, Bethea Pace, mc Atlanta Southern 92, cb 92, Simcoe.
Cossey, Thomas Watson, mc Atlanta Southern 91, cb 96, Jones Chapel.
Harris, George Riley, ng, cb 92, Garrison Point.
Hartung, Gottloeb, mc Wuerzburg, Germany 78, cb 92, Cullman.
Humphries, Roman Willis, mc Atlanta Southern 92, cb 96, Logan.
Johnson, Marquis LaFayette, mc Alabama 75, cb Marshall 86, Cullman.
Martin, William Henderson, mc Atlanta 88, cb 89, Ruby.
Price, William Henry, mc univ Tennessee 90, cb 98, Crane Hill.
Walling, John Henry, ng, cb 89, Vinemont.
Watts, George Wesley, mc Atlanta Southern 88, cb 89, Holley Pond.
Whorton, William Walton, mc Vanderbilt 90, cb 98, Cullman.
Yielding, John, mc univ Grant 94, cb 94, Holly Pond.
Total, 14.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Burnum, Francis Marion, mc Nashville 79, cb 86, Cullman.
Johnston, P. T., mc univ Tennessee 89, cb Marion 86, Bremen.
Keller, Louis Martin, mc Atlanta 88, cb 88, Etha.

Moon, James P., illegal, Bremen.
Oden, James Henry, ng, cb 88, Unity.
Winn, Joseph Jefferson, mc univ Vanderbilt 89, cb 89, Baileyton.
Young, J. M., illegal, Cranehill.
Total, 7.

Moved into the county—P. T. Johnston, from Franklin county to Bremen.

Moved out of the county—J. J. Crumbley, to Carrollton, Ga.; G. F. Moon, to Texas.

Examinations—Vincent Badolati, mc Naples, Italy, certificate granted; Luigi Cocciola, mc Naples, Italy, certificate granted; Doc J. Parker, mc Memphis, certificate granted.

Deaths—W. A. McDonald, Baileyton; E. W. Terrell, Cullman; Elbert Hays, Cullman.

DALE COUNTY MEDICAL SOCIETY—Tuscaloosa, 1887.

OFFICERS.

President, R. D. Reynolds; Vice-President, S. M. C. Howell; Secretary, R. F. Harper; Treasurer, R. F. Harper; Health Officer, E. B. Ard. Censors—E. B. Ard, R. F. Harper, B. L. Byrd, F. B. Cullens, J. C. Oates.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Ard, Erastus Byron, mc univ Vanderbilt 87, cb 87, Ozark.
Barnes, Charles Duncan, mc Alabama 97, cb 97, Skipperville.
Belcher, William Ree, mc Atlanta Southern 90, cb 91, Daleville.
Bell, Seaborn Bently, mc Georgia Reform 92, cb 95, Echo.
Byrd, Benjamin Littlebury, mc Alabama 92, cb 92, Daleville.
Coleman, Benjamin Franklin, mc univ Nashville 61, cb Bullock 75, Ozark.
Cullens, Frederick Bacon, ng, state board 97, Ozark.
Dawson, George Washington, mc Alabama 94, cb Chilton 94, Newton.
Harper, Robert Franklin, mc Alabama 88, cb Coffee 88, Ozark.
Holman, John Clinton, mc Jefferson 56, cb 87, Ozark.
Holman, Henderson Looney, mc Memphis 98, cb Marion 98, Ozark.
Howell, Samuel Matthew Crawford, mc Atlanta 91, cb 91, Midland City.
Lingo, John Henry, ng, state board 97, Clayhatchee.
Mixson, William Daniel, mc Chattanooga 98, cb 98, Haw Ridge.
Norris, ——, mc ——— —, state board —, Charlton.

Oates, Joshua Camillus, mc univ Tennessee 98, state board 98, Pinckard.

Reynolds, Robert Davis, mc Alabama 80, cb 87, Ozark.

Total, 17.

Honorary Members.

James Bottoms, (superannuated), mc Augusta 56, cb 87, Ozark.

Total, 1.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Baxter, Hugh Curry, mc Atlanta 86, cb 87, Midland City.

Cowart, William Augusta, ng, cb Coffee 85, Charlton.

Dalton, Christopher Columbus, mc Georgia Reform 91, cb 91, Wicksburg.

Davie, Mercer Stillwell, mc Jefferson 67, cb 87, Pinckard.

Morris, Andrew Jackson, mc Atlanta Southern 87, mc Geneva 89, Newton.

Scott, Marcus Tullius Cicero, mc Birmingham 97, cb Henry 97, Clopton.

Smisson, Henry James, mc South Carolina 60, cb 87, Wicksburg.

Spears, Phillip Benton, mc Georgia Reform 91, cb 91, Pinckard.

Weed, Samuel LaFayette, mc Alabama 85, cb 87, Ariosto.

Total, 9.

Moved into the county—George Washington Dawson, from Verbena, Chilton county, to Newton; —— Norris, from —— to Charlton; John Henry Lingo, from Alston, Barbour county, to Clayhatchee.

Moved out of the county—Terrell Taylor Campbell, from Pinckard to Hartford, Geneva county; George Henry Blackshear, from Charlton to Dundee, Geneva county; William Collingsworth Steagall, from Ozark to Abbeville, Henry county.

Examinations—Marion Simeon Stough, mc Atlanta 99, certificate refused.

DALLAS COUNTY MEDICAL SOCIETY—Montgomery, 1875.

OFFICERS.

President, Clement Ritter; Vice-President, J. M. Donald; Secretary, B. B. Rogan; Treasurer, S. Kirkpatrick; Health Officer, S. G. Gay. Censors—J. P. Furniss, E. B. Ward, Clement Ritter, S. G. Gay, J. M. Donald.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Allison, Samuel Blakeman, mc Louisville 91, cb 93, Carlowville.

Caine, Vaughn H., mc Alabama 92, cb Perry 92, Safford.

Chapman, John Thomas, mc Alabama 86, cb Marengo 87, Selma.
Cochrane, Robert Miller, mc univ Virginia 65, cb 78, Eleanor.
Donald, James Marion, mc Alabama 84, cb 84, Bridges.
Donald, Joseph Marion, mc univ Louisiana 54, cb 78, Howell.
DuBose, Frank Goodwin, mc Tulane univ 93, cb Talladega 93, Selma.
Edwards, Daniel B., mc Alabama 98, cb 98, Polk.
Furniss, John Perkins, univ New Orleans 66, cb 78, Selma.
Gay, Samuel Gilbert, mc Alabama 87, cb 87, Selma.
Gee, William Henry, mc Alabama 98, cb Mobile 98, Burnsville.
Groves, Joseph Asbury, mc South Carolina 54, cb 78, Orrville.
Harper, William Wade, mc univ Tulane 91, cb 91, Selma.
Howard, Thomas Greenwood, mc univ Washington 68, cb Autauga 78, Selma.
Kendall, William Quinton, mc p and s Baltimore 80, cb 80, Berlin.
King, Goldsby, mc South Carolina 80, cb 80, Selma.
Kirkpatrick, Samuel, mc univ Vanderbilt 88, cb 88, Selma.
Kyser, James H., mc univ Tulane 97, cb 97, Richmond.
Lockhart, Thomas Ernest, mc univ Tulane 90, cb Perry 90, Selma.
McKinnon, John Alexander, mc univ Louisiana 67, cb 78, Selma.
Moore, John Thomas, mc Alabama 91, cb91, Orrville.
Pegues, Charles Ives, mc univ Tulane —, cb 96, Safford.
Pitts, William McLean, mc Louisville 94, cb 94, Selma.
Phillips, William Crawford, mc univ Tulane 73, cb 78, Vallegrande.
Ritter, Clement, mc Jefferson-Philadelphia 90, cb DeKalb 90, Selma.
Rogan, Barney Burns, mc univ Grant, Chattanooga 96, cb 96, Selma.
Sellers, W. I., mc ——— —, cb —, Browns.
Sutton, Robert Lee, mc univ Columbia 89, cb Lee 89, Orrville.
Taylor, William Henry, mc Alabama 87, cb Marengo 87, Central Mills.
Ward, Edward Burton, mc univ New York 82, cb Hale 82, Selma.
Weisinger, John Alonzo, mc Alabama 98, cb 98, Talmage.
Total, 31.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Allison, Joseph D., mc South Carolina 78, cb 78, Carlowville.
Boykin, Joseph Owen, mc univ Transylvania 43, cb 78, Tilden.
Boykin, Samuel Swift, mc Alabama 96, cb Mobile 98.
Burwell, Lincoln Laconia (col) ,mc Leonard, N. C., 89, state board 89, Selma.
Dubose, J. J., mc ———, cb ———, Summerfield.
Hall, John James, mc univ Louisiana 67, cb 78, Orrville.
Kyser, George Washington, mc Richmond 65, cb 78, Richmond.

McKinnon, Kenneth, mc univ Louisiana 49, cb 78, Plantersville.
Moseley, Elijah Bucklee, mc univ Louisiana 57, cb 78, Boguechitto.
Pugh, Braxton Bragg, mc Alabama 89, cb Clark 89, Browns.
Riggs, Watt, mc ———, cb ———, Pleasant Hill.
Stewart, William Champney, mc South Carolina 58, cb 78, Soap Stone.
Dye, J. H., mc Eclectic Medical College of N. Y., (examination pending).

Total, 13.

Moved into the county—J. J. DuBose, from Lowndes county to Summerfield; J. H. Dye, from New York to Burnsville.

Moved out of the county—R. P. Chisholm, from Summerfield to Bessemer; William Whitman Stewart, from Berlin to Pineapple, Wilcox county; J. Louis Snow, from Burnsville tc Farmersville, Lowndes county.

Examinations—A. Sanguinetti, mc Montezuma 98, certificate refused; H. D. Furniss, mc univ Virginia 99, certificate granted.

Deaths—Benjamin Clarence Adams, mc Alabama 72, Safford, cancer of stomach.

*DeKALB COUNTY MEDICAL SOCIETY.—Greenville, 1885.

OFFICERS.

President, W. I. Wright; Vice-President,, A. J. Farley; Secretary, W. E. Quinn; Treasurer, H. P. McWhorter; Health Officer, E. P. Nicholson. Censors.—W. E. Quinn, W. S. Duff, H. P. McWhorter, E. P. Nicholson, T. H. Appleton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Appleton, Thomas Hayne, mc Chattanooga 92, cb 92, Collinsville.
Black, John Hugh, mc Georgia Eclectic 93, cb 93, Halford.
Duff, William Sayers, mc Alabama 89, cb 90, Fort Payne.
Farley, Andrew Jackson, mc Atlanta 90, cb Shelby 90, Collinsville.
Killian, Henry Elliott, ng, cb 89, Brandon.
McWhorter, Horace Puckett, mc univ Vanderbilt 81, cb 85, Collinsville.
Miller, James Taylor, mc univ Vanderbilt 78, cb 85, Collinsville.
Moore, Wiley Evan, mc Atlanta 90, cb Shelby 90, Lebanon.
Nicholson, Edward Pierson, mc univ Nashville 61, cb 85, Valley Head.
Quin, William Everett, mc s of m Kentucky 81, cb 85, Fort Payne.
Sherman, James Richard, mc Georgia Eclectic 89, cb Marshall 89, Sand Mountain.

Smith, Samuel Parish, mc s of m Kentucky 89, cb 89, Crossville.
Wright, Charles Wesley, mc Alabama 93, cb 93, Grove Oak.
Wright, William Ira, mc univ Vanderbilt 90, cb 91, Dawson.
Total, 14.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Bailey, Alexander Henry, ng, cb 89, Fort Payne.
Green, Philemon Buel, mc univ Vanderbilt 76, cb 85, Sulphur Springs.
Green, William Mastin, mc univ Vanderbilt 77, cb 85, Fort Payne.
Harrison, Joseph J., mc univ Vanderbilt 93, cb 93, Geraldine.
Hall, John Deckard, mc Southern 92, cb 97, Chavies.
Howard, Joshua Elijah, mc univ Tennessee 86, cb 95, Henegar.
Howard, Isaac William, mc Memphis 98, cb 99, Sulphur Springs.
Winston, John Nelson, mc univ Louisville 66, cb 85, Valley Head.
Wooten, William James, ng, cb 89, Musgrove.
Wyett, J. J., ng, cb 89, Geraldine.
Total, 10.

*NOTE.—As no report has been received from DeKalb county this year the report for 1899 is here reproduced.

ELMORE COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, N. B. Sewell; Vice-President, W. H. Blake; Secretary, W. M. Gamble; Treasurer, W. M. Gamble; Health Officer, S. O. Humphries. Censors—O. S. Justice, J. W. Sewell, J. F. Rushin, S. O. Humphries, W. H. Blake.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Blake, Wyatt Heflin, mc univ Vanderbilt 84, cb Randolph 87, Wetumpka.
Estes, Mordecai John Elliott, mc Atlanta 95, mc Chilton 95, Deatsville.
Fitzpatrick, Phillip, mc univ Tulane 63, cb 84, Wetumpka.
Gamble, William Melvin, mc Louisville 87, cb Jefferson 87, Wetumpka.
Hill, Robert McCullough, mc Alabama 94, cb 96, Ware.
Howle, James Augustus, mc Alabama 90, cb 90, Eclectic.
Huddleston, William Allen, mc Atlanta 80, cb 84, Wetumpka.
Humphries, S. Osceola, mc Jefferson 85, cb 85, Elmore.
Haigler, James Robert, mc Alabama 97, cb Montgomery 97, Wetumpka.
Jowers, Sol. Franklin, mc Alabama 85, cb 85, Kowaliga.

Justice, Oscar Suttle, mc Alabama 85, cb 85, Wetumpka.
Moon, Eddie P., mc univ Vanderbilt 98, cb 98, Buyck.
Nix, James Ringold, mc South Carolina 67, cb 84, Deatsville.
Robinson, Edwin Hunt, mc univ Pennsylvania 52, cb 84, Robinson Springs.
Rushin, James Thomas, mc univ Tennessee 83, cb 84, Tallassee.
Scott, Harvey Edward, mc univ Vanderbilt 80, cb Dallas 80, Wetumpka.
Sewell, Jabez Wesley, mc Alabama 90, cb 90, Titus.
Sewell, Neal Baker, mc univ Vanderbilt 86, cb 86, Buyck.
Total, 18.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Beckett, Thomas Travis, mc univ Tulane 59, cb 84, Titus.
Boddie, Henry B., illegal, Tallassee.
Campbell, Archie Graham, ng, cb 84, Tallassee.
Dorough, John William, mc Atlanta 94, cb 94, Tallassee.
Fielder, Martin Lucius, mc Graffenburg 56, cb 84, Eclectic.
Garrett, Allen Jefferson, mc Alabama 93, cb 93, Kent.
Gamble, John Wesley, mc Louisville 72, cb Blount 74, Wetumpka, (retired).
Howe, Robert Daniel, mc univ Tennessee 90, cb Walker 91, Elmore.
Huddleston, Robert Lee, mc Atlanta 80, cb Autauga 92, Speigner.
Lett, Harrison Templeton, mc univ Tulane 75, cb 84, Good Hope.
Powell, James Robert, mc Graffenburg 65, cb 84, (retired), Tallassee.
Powell, Abel Anderson, mc Atlanta Southern 92, cb 92, (retired), Tallassee.
Robinson, Dudley, mc Alabama 51, Robinson Springs.
Warren, William Allen, mc Alabama 85, cb 85, Tallassee.
Total, 14.

Moved into the county—John Wesley Gamble, from Birmingham to Wetumpka; J. R. Haigler, from Montgomery to Wetumpka; H. E. Scott, from Georgiana to Wetumpka.

Deaths—George Bernard Judkins, mc Jefferson 59, cb Macon 79, Wetumpka, of Bright's disease.

ESCAMBIA COUNTY MEDICAL SOCIETY—Greenville, 1885.

OFFICERS.

President, S. C. Henderson; Vice-President, H. H. Malone; Secretary, P. H. M. Tippin; Treasurer, P. H. M. Tippin; Health Officer, E. T. Parker. Censors—S. C. Henderson, E. T. Parker, W. L. Abernathy, M. Foshee, P. H. M. Tippin.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Abernathy, William L., mc Alabama 94, cb Monroe 94, Flomaton.
Foshee, Mason, mc univ Virginia 96, cb 96, Brewton.
Henderson, Stephen Cary, mc Alabama 87, cb 87, Brewton.
Malone, Henry Holcomb, mc univ New York 60, cb 86, Brewton.
Martin, John Elijah, mc Alabama 75, cb Bullock 79, Brewton.
Owens, Jared Durwood, mc Alabama 79, cb Butler 79, Pollard.
Parker, Edwin Theodore, mc univ Tulane 91, cb 91, Brewton.
Smith, Price Hall, mc Alabama 94, cb 95, Brewton.
Tippin, Philip Henry Mulcahy, mc Alabama 94, cb 94, Brewton.
Webb, Alfred Pellar, mc Alabama 96, cb Washington 97, Atmore.
Total, 10.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Abernathy, William Henry, mc Transylvania 48, cb Monroe 77, Flomaton.
Christian, ———, mc ———, cb ———, Jack Springs.
Ford, J. T. B., mc ———, cb 86, Pollard.
McLendon, Lewis Marshall, mc Alabama 74, cb Butler 84, Brewton.
Total, 4.

Moved into the county—William Henry Abernathy, from Tinela, Monroe county, to Flomaton.

ETOWAH COUNTY MEDICAL SOCIETY—1878.

OFFICERS.

President, E. T. Camp; Vice-President, J. H. Ellison; Secretary, R. F. McConnell; Treasurer, E. S. Jones; Health Officer, E. T. Camp.

Censors—E. S. Jones, W. J. D. Lawrence, J. P. Stewart. F. P. Landers, R. F. McConnell.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Acton, William H., mc Alabama 86, cb Jefferson 86, Alabama City.
Baskin, Hershell V., mc Alabama 98, cb 98, Coats Bend.
Camp, Erasmus T., mc Alabama 85, cb Cleburne 85, Gadsden.
Caldwell, William Dratton, mc univ Vanderbilt 88, cb Lauderdale 88, Alabama City.
Edwards, William Sterling, mc s of m Kentucky 85, cb 85, Gadsden.
Ellison, John Henry, mc univ Vanderbilt 88, cb 89, Walnut Grove.
Ford, William Franklin, mc univ Vanderbilt 95, cb 95, Hokes Bluff.
Hurst, James A., mc Alabama 91, cb 91, Walnut Grove.
Jones, Eli Spear, mc Alabama 83, cb Jefferson 83, Gadsden.
Landers, Franklin Pearce, mc Atlanta 83, cb 84, Hokes Bluff.
Lawrence, William John D., mc univ Vanderbilt 86, cb Cherokee 86, Turkey Town.

Liddell, John Brown, mc Atlanta 82, cb 82, Gadsden.
McConnell, Robert Franklin, mc Atlanta 81, cb St. Clair 81, Attalla.
Morgan, George Washington, mc univ Nashville 89, cb 89, Keener.
Ralls, John Perkins, mc Georgia 44, cb 78, Gadsden.
Stewart, John Pope, mc Alabama 86, cb 86, Attalla.
Wilson, George Washington, mc Alabama 95, cb 96, Attalla.
Wood, James Harden, mc univ Vanderbilt 82, cb 82, Attalla.
Total, 18.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Anderson, Robert Baily, mc Atlanta 88, cb 88, Walnut Grove.
Baker, Daniel Harris, mc univ Vanderbilt 82, cb Macon 82, Gadsden.
Coggins, William Thomas, mc —, cb 88, Keener.
Dowdy, Edgar Lee, mc univ Vanderbilt 76, cb 76, Keener.
Dowdy, Robert M., mc univ Vanderbilt —, cb —, Legard.
Edmonson, E. J., mc Atlanta 98, cb Calhoun 98, Cobb City.
Funderburg, William Lewis, mc Atlanta Southern 82, cb DeKalb 86, Gadsden.
Guice, Charles Lee, mc Chattanooga 93, cb Dale 93, Gadsden.
Johnson, James Kemper, mc univ Nashville 84, cb 86, Seaborn.
Kinnett, Jackson Flavis, mc Georgia Eclectic 92, cb Shelby 92, Markton.
Lester, J. H., mc ———, cb ———, Attalla.
Blackshear, R. D., mc S of M Kentucky 92, cb Dale 94, Gadsden.
Slaughter, Charles Jefferson, mc ———, cb 81, Aurora.
Wright, Milton Royal, mc Alabama 78, cb 78, Gadsden.
Total, 14.

Moved into the county—C. L. Guice, from Barber county to Gadsden; Robert M. Dowdy, from Randolph county to Legard; E. J. Edmonson, from Calhoun county to Cobb City.

Moved out of the county—Henry Forney Gilliland, from Hill to Kentucky.

FAYETTE COUNTY MEDICAL SOCIETY—Selma, 1879.

OFFICERS.

President, T. M. Peters; Vice-President, J. G. Smith; Secretary, W. A. Graham; Treasurer, W. A. Graham; Health Officer, M. R. Seay. Censors—W. A. Graham, J. G. Smith, Victor Savage, J. D. Young, T. M. Peters.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Collins, J. William, mc ....., cb ....., Spencer.
Graham, William Alexander, mc Louisville 92, cb 92, Fayette.

Hollis, Jonathan Shelton, mc Alabama 81, cb 81, Covin.
Jones, William Wilburn, old law 58, cb 84, Newtonville.
Peters, Thomas Marion, mc Alabama 90, cb 90, Fayette.
Randolph, John F., mc Memphis Hospital 98, cb 98, Wayside.
Savage, Victor, mc univ Vanderbilt 89, cb 89, Pilgrim.
Seay, Mark Rollins, old law 76, cb Lamar 86, Berry Station.
Smith, John Gardner, mc Alabama 89, cb Lamar 89, Bankston.
Young, James Dapsie, mc Memphis Hospital 94, cb Lamar 94, Fayette.

Total, 10.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Hocut, Lucius Thornton, mc Atlanta 58, cb 83, Davis Creek.
Lane, Jesse Washington, mc univ Vanderbilt 86, cb Walker 86, New River.

Total, 2.

Moved into the county—John F. Randolph, from Pickens county to Wayside; J. William Collins, from Florida to Spencer.

Moved out of the county—Henry Bascum Lane, from Berry Station to Ensley.

*FRANKLIN COUNTY MEDICAL SOCIETY—Tuscaloosa, 1887.

OFFICERS.

President, J. M. Clark; Vice-President, W. W. White; Secretary, W. J. Clark; Treasurer, W. J. Clark; Health Officer, L. W. Desprez. Censors—L. W. Desprez, N. T. Underwood, J. A. Trimble, O. Sargent, E. M. Harris.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barnes, Thomas Benton, mc Memphis 74, cb 88, Darlington.
Clarke, John King, Sr., mc univ Nashville 58, cb 88, Russellville.
Clarke, John King, Jr., mc univ Vanderbilt 84, cb 88, Belgreen.
Clark, John McWhorter, mc univ Louisville 50, cb Lawrenceville 88, Russellville.
Clark, William Josiah, mc Birmingham 96, cb 96, Russellville.
Cleere, William Washington, mc univ Nashville 82, cb 88, Belgreen.
Desprez, Louis Willoughby, mc Alabama 71, cb 88, Russellville.
Harris, Elijah McCulloch, mc univ Vanderbilt 87, cb 87, Russellville.
Hughes, ——, mc ———, cb ———, Pleasant Site.
Jones, Thomas Speck, mc univ Vanderbilt 78, cb 88, Russellville.
Lee, ——, mc ———, cb ———, Red Bay.
Nance, James W., mc Baltimore 94, cb —, Russellville.
Sargent, Oscar, mc univ Vanderbilt 80, cb 88, Darlington.

Trimble, Joseph Adison, mc Vanderbilt 81, cb —, Russellville.
Underwood, Nimrod Terrell, mc Alabama 86, cb 88, Russellville.
White, William Wyatt, mc s of m Kentucky 85, cb Marion 85, Newburg.
White, Robert Josiah, mc Louisville 54, cb 88, Burleson.
Total, 17.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Sevier, Daniel Vertner, mc —, cb —, Russellville.
Total, 1.

GENEVA COUNTY MEDICAL SOCIETY—Montgomery, 1888.

OFFICERS.

President, R. L. Justice; Vice-President, J. N. Clements; Secretary, A. B. Jernigan; Treasurer, A. B. Jernigan; Health Officer, R. L. Justice. Censors—A. R. Chapman, M. F. Fleming, J. C. Fleming, R. L. Justice, E. Y. Malone.

NAMES OF MEMBERS, WITH THEIR COLLEGES AND POST-OFFICES.

Ard, James Henry, mc 88, cb 88, Geneva.
Chalker, William Pounce, mc Georgia Eclectic 97, cb 97, Sanders.
Chapman, Abner Richard, mc Univ. Vanderbilt 88, cb Coffee 88, Geneva.
Chapman, William Hickerman, mc Alabama 73, cb Coffee 88, Geneva.
Clements, John N., mc Jefferson 56, cb 88, Flat.
Cox, William, mc —— ——, cb 88, Dundee.
Douglas, Silas William, mc ———, cb Escambia 88, Eunola.
Fleming, John Clifton, mc Alabama 91, cb 95, Hartford.
Fleming, Millard Filmore, mc Louisville 90, cb 88, Geneva.
Hooten, William Arrington, mc Atlanta 95, cb Henry 95, Hartford.
Jernigan, Alpheus Baker, mc ———, cb 88, Geneva.
Justice, Robert Lee, mc Alabama 94, cb Pike 94, Geneva.
Malone, Eugene Yewell, mc Alabama 92, cb Escambia 92, Geneva.
Rivenbark, Jackson J., mc Georgia Eclectic 97, cb 97 Hartford.
Shutes, Joseph V., mc ———, cb 88, Lupton.
Smith, Gordon Wright, mc Louisville 92, cb 92, Big Creek.
Total, 16.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Blackshear, George Henry, mc S of M Kentucky, cb Dale 86, Dundee.
Holly, John H., mc Alabama 98, cb 98, Elton.
Powell, Charlie, mc Alabama 1900, cb 1900, Lupton.
Treadwell, Hardy P., mc Georgia Eclectic 93, cb 88, Geneva.
Ward, Thomas Jefferson, mc ———, cb 88, Watford.
Total, 5.

Illegal Practitioners—John D. Jay, Elton; Walter Ramsey, Warwick; William Smith, Marl.

Moved into the county—G. H. Blackshear, from Charlton, Dale county, to Dundee.

Moved out of the county—LaFayette Jerkins, to Atlanta, Ga.

* GREENE COUNTY MEDICAL SOCIETY—Selma, 1878.

OFFICERS.

President, J. P. Barclay; Vice-President, A. H. Byrd; Secretary, W. R. Hatter; Treasurer, W. R. Hatter; Health Officer, ———. Censors—A. M. Duncan, R. D. Lucius, S. S. Murphy, D. O. McGhee, A. P. Smith.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barclay, James Paxton, mc univ New York 71, cb 79, Eutaw.
Byrd, Alexander Hamilton, mc univ New York 69, cb 80, Eutaw.
Duncan, Augustus Meek, mc Alabama 74, cb 79, West Greene.
Gunter, John Leon, mc Memphis 94, cb Pickens 95, Eutaw.
Harkness, William Baskin, mc Alabama 97, cb 97, Boligee.
Hatter, William Reuben, mc univ Tulane 89, cb 89, Boligee.
Hagler, John Wiley, mc Alabama 94, cb Tuscaloosa 94, Clinton.
Legare, Julius Kenneth, mc univ New York 86, cb 87, Forkland.
Lucius, Richard DeKalb, mc Alabama 71, cb Tuscaloosa 78, Eutaw.
McGehee, Dabney Oswell, mc Alabama 72, cb 79, Eutaw.
Moore, George Augustus, mc Alabama 90, cb 90, Clinton.
Murphy, Samuel Silenus, mc Alabama 81, cb 84, Pleasant Ridge.
Pierce, Thomas William, mc univ Virginia 75, cb 79, Knoxville.
Smith, Armand Pfister, mc s of m Kentucky 75, cb 79, Eutaw.
Smith, John Alexander, mc Atlanta 58, cb 79, Union.
Snoddy, Virgil, mc Alabama 73, cb 79, Knoxville.
Total, 16.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Morgan, Isaac DuBose, mc univ Pennsylvania 58, cb 79, Eutaw.
Mobley, W. A., mc Alabama —, cb —, West Greene.
Pearson, Edward Pallen, mc univ Louisville 73, cb 84, McAlpine.
Purnell, James Knox, mc —— —, cb Pickens 88, Lewiston.
Snoddy, Samuel, mc univ Transylvania 31, cb 79, Mantua.
Total, 5.

*NOTE.—As no report has been received from Greene county this year, the report of 1899, is here reproduced.

Trimble, Joseph Adison, mc Vanderbilt 81, cb —, Russellville.
Underwood, Nimrod Terrell, mc Alabama 86, cb 88, Russellville.
White, William Wyatt, mc s of m Kentucky 85, cb Marion 85, Newburg.
White, Robert Josiah, mc Louisville 54, cb 88, Burleson.
Total, 17.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Sevier, Daniel Vertner, mc —, cb —, Russellville.
Total, 1.

GENEVA COUNTY MEDICAL SOCIETY—Montgomery, 1888.

OFFICERS.

President, R. L. Justice; Vice-President, J. N. Clements; Secretary, A. B. Jernigan; Treasurer, A. B. Jernigan; Health Officer, R. L. Justice. Censors—A. R. Chapman, M. F. Fleming, J. C. Fleming, R. L. Justice, E. Y. Malone.

NAMES OF MEMBERS, WITH THEIR COLLEGES AND POST-OFFICES.

Ard, James Henry, mc 88, cb 88, Geneva.
Chalker, William Pounce, mc Georgia Eclectic 97, cb 97, Sanders.
Chapman, Abner Richard, mc Univ. Vanderbilt 88, cb Coffee 88, Geneva.
Chapman, William Hickerman, mc Alabama 73, cb Coffee 88, Geneva.
Clements, John N., mc Jefferson 56, cb 88, Flat.
Cox, William, mc —— ——, cb 88, Dundee.
Douglas, Silas William, mc ———, cb Escambia 88, Eunola.
Fleming, John Clifton, mc Alabama 91, cb 95, Hartford.
Fleming, Millard Filmore, mc Louisville 90, cb 88, Geneva.
Hooten, William Arrington, mc Atlanta 95, cb Henry 95, Hartford.
Jernigan, Alpheus Baker, mc ———, cb 88, Geneva.
Justice, Robert Lee, mc Alabama 94, cb Pike 94, Geneva.
Malone, Eugene Yewell, mc Alabama 92, cb Escambia 92, Geneva.
Rivenbark, Jackson J., mc Georgia Eclectic 97, cb 97 Hartford.
Shutes, Joseph V., mc ———, cb 88, Lupton.
Smith, Gordon Wright, mc Louisville 92, cb 92, Big Creek.
Total, 16.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Blackshear, George Henry, mc S of M Kentucky, cb Dale 86, Dundee.
Holly, John H., mc Alabama 98, cb 98, Elton.
Powell, Charlie, mc Alabama 1900, cb 1900, Lupton.
Treadwell, Hardy P., mc Georgia Eclectic 93, cb 88, Geneva.
Ward, Thomas Jefferson, mc ———, cb 88, Watford.
Total, 5.

Illegal Practitioners—John D. Jay, Elton; Walter Ramsey, Warwick; William Smith, Marl.

Moved into the county—G. H. Blackshear, from Charlton, Dale county, to Dundee.

Moved out of the county—LaFayette Jerkins, to Atlanta, Ga.

* GREENE COUNTY MEDICAL SOCIETY—Selma, 1878.

OFFICERS.

President, J. P. Barclay; Vice-President, A. H. Byrd; Secretary, W. R. Hatter; Treasurer, W. R. Hatter; Health Officer, ———. Censors—A. M. Duncan, R. D. Lucius, S. S. Murphy, D. O. McGhee, A. P. Smith.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barclay, James Paxton, mc univ New York 71, cb 79, Eutaw.
Byrd, Alexander Hamilton, mc univ New York 69, cb 80, Eutaw.
Duncan, Augustus Meek, mc Alabama 74, cb 79, West Greene.
Gunter, John Leon, mc Memphis 94, cb Pickens 95, Eutaw.
Harkness, William Baskin, mc Alabama 97, cb 97, Boligee.
Hatter, William Reuben, mc univ Tulane 89, cb 89, Boligee.
Hagler, John Wiley, mc Alabama 94, cb Tuscaloosa 94, Clinton.
Legare, Julius Kenneth, mc univ New York 86, cb 87, Forkland.
Lucius, Richard DeKalb, mc Alabama 71, cb Tuscaloosa 78, Eutaw.
McGehee, Dabney Oswell, mc Alabama 72, cb 79, Eutaw.
Moore, George Augustus, mc Alabama 90, cb 90, Clinton.
Murphy, Samuel Silenus, mc Alabama 81, cb 84, Pleasant Ridge.
Pierce, Thomas William, mc univ Virginia 75, cb 79, Knoxville.
Smith, Armand Pfister, mc s of m Kentucky 75, cb 79, Eutaw.
Smith, John Alexander, mc Atlanta 58, cb 79, Union.
Snoddy, Virgil, mc Alabama 73, cb 79, Knoxville.
Total, 16.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Morgan, Isaac DuBose, mc univ Pennsylvania 58, cb 79, Eutaw.
Mobley, W. A., mc Alabama —, cb —, West Greene.
Pearson, Edward Pallen, mc univ Louisville 73, cb 84, McAlpine.
Purnell, James Knox, mc —— —, cb Pickens 88, Lewiston.
Snoddy, Samuel, mc univ Transylvania 31, cb 79, Mantua.
Total, 5.

*NOTE.—As no report has been received from Greene county this year, the report of 1899, is here reproduced.

HALE COUNTY MEDICAL SOCIETY—Montgomery, 1875

OFFICERS.

President, R. H. Duggar; Vice-President, W. T. Downey; Secretary; J. U. Ray, Jr.; Treasurer, J. U. Ray, Jr.; Health Officer, Jacob Huggins. Censors—R. H. Duggar, W. T. Downey, E. P. McCollum, J. U. Ray, Jr.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Abernathy, Thomas Pinnic, mc univ Memphis 99, cb 99, Havana.
Barden, James Pennington, mc univ Southern 75, cb 78, Greensboro.
Davis, Andrew Rufus, mc Atlanta 90, cb 90, Five Mile.
Downey, William Thomas, mc of Louisiana 70, cb 70, Greensboro.
Driver, Elisha Newton, mc univ Louisiana 93, cb 93, Newbern.
Duggar, Reuben Henry, mc univ Pennsylvania 58, cb 78, Gallion.
Gewin, William Christopher, mc univ Louisiana 78, cb 78, Akron.
Griffin, Rufus Jackson, mc Alabama 90, cb 90, Moundville.
Huggins, Jacob, mc univ Pennsylvania 60, cb 78, Newbern.
Leonard, Madison Waldo, mc Alabama 94, cb 94, Cedarville.
Magruder, Levin Wailes, Jr., mc South 99, cb 1900, Greensboro.
McCollum, Edgar Patton, mc Alabama 93, cb 93, Greensboro.
Perry, Henry Gaither, mc Georgia Reform 88, cb Butler 88, Greensboro.
Ray, Jacob Usry, Jr., mc Tennessee 93, cb Bibb 93, Greensboro.
Spencer, George M., ng, old law 78, cb Tuscaloosa 78, Brush Creek.
Tidmore, Dodson Wright, mc univ South 99, cb 1900, Phipps.
Young, Henry Tutwiler, mc univ South 99, cb 1900, Greensboro.
Total 17.

Honorary Members.

Webb, Louis DeYampert, mc univ New York 69, cb 78, Greensboro.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Carson, Shelby Chadwick, mc univ Tulane 74, cb Greene 79, Greensboro.

Moved into the county—H. G. Perry, from Greenville, Butler county, to Greensboro; L. D. Webb, from Scotts to Greensboro; T.

F. Moore, from Linwood, Pike county, to Stewarts.

Moved out of the county—Thomas F. Gallion, from Gallion to parts unknown.

Examinations—John Harrison Owen, mc univ Memphis 99, certificate refused; Thomas Pinnic Abernathy, mc univ Memphis 99, certificate granted; Dodson Wright Tidmore, mc univ South 99, certificate granted; Henry Tutwiler Young, mc univ South 99, certificate granted; Levin Wailes Magruder, Jr., mc univ South 99, certificate granted.

Deaths—David James Castleman, mc univ Tulane 96, Dec. 10, 1899, of septicaemia; James Adams Tidmore, mc univ Kansas City 84, an. 23, 1900, of erysipelas.

NOTE—Officers for 1899 were as follows:

President, E. P. McCollum; Vice-President, J. U. Ray, Jr.; Secretary, D. J. Castleman; Treasurer, D. J. Castleman; Health Officer, Jacob Huggins.

HENRY COUNTY MEDICAL SOCIETY—Birmingham, 1883.

OFFICERS.

President, F. I. Moody; Vice-President, W. M. Ryals; Secretary, S. O. Carlisle; Treasurer, H. P. Calhoun; Health Officer, W. M. Ryals. Censors—F. I. Moody, G. A. Hammond, J. R. G. Howell, W. J. Lee, Jno. H. Stovall.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Atkeson, Clarence Lee Crawford, mc phys and surg Baltimore, 84, cb Lee 86, Columbia.

Burdeshaw, Lee Roy, mc Chattanooga 99, cb 99, Headland.

Calhoun, Henry P., mc Atlanta 95, cb 95, Cottonwood.

Carlisle, Samuel Oscar, mc univ Vanderbilt 94, cb Pike 94, Dothan.

Davie, Mercer Stillwell, Jr., mc univ Tulane 99, cb Bibb 99, Dothan.

Ellis, James L., mc Memphis Hospital 86, cb Dale 86, Dothan.

Fleming, Porter Thomas, mc Louisville 94, cb Coffee 94, Dothan.

Fowler, James Thomas, mc South Carolina 81, cb 81, Shorterville.

Hammond, Geo. Abner, mc Baltimore 84, cb 84, Dothan.

Hendrix, Leonidas, mc Atlanta 90, cb Pike 90, Abbeville.

Howell, John Robert Graves, mc Atlanta 90, cb Dale 88, Dothan.

Lee, William Joseph, mc univ Louisiana 60, cb 83, Abbeville.

Lee, J. E., mc Atlanta 95, cb 99, Gordon.

Moody, Fleming Isaac, mc phys and surg Baltimore 76, cb 83, Dothan.

Nichols, L. S., mc Alabama 97, cb 97, Abbeville.

Phillips, Bernard, mc Heidleberg, Germany 74, cb 91, Dothan.

Ryals, William M., mc Atlanta 87, cb 95, Cowarts.

Stovall, John Henry, mc Atlanta 60, cb 89, Columbia.
Steagall, William Collinsworth, mc South Carolina 60, cb Dale 87, Abbeville.
Steagall, Albert Sidney, mc Alabama 88, cb Dale 87, Abbeville.
Vaughn, David Horatio, mc Atlanta 88, cb 89, Gordon.
Williams, William Henry, mc Memphis Hospital 89, cb 89, Dothan.
Long, James Benjamin, mc Louisville 81, cb 83, Abbeville.
Hardwick, William Pleasant, mc Alabama 67, cb 88, Headland.
Total, 25.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Blackledge, John Richard, mc Alabama 89, cb 91, Abbeville.
Chalker, B. C., mc Eclectic —, (illegal), Ashford.
Fowler, John Lindsey, mc South Carolina 51, cb 83, Shorterville.
Fillingim, W. H., —, (illegal), Ashford.
Hill, A. S., mc Atlanta —, (illegal), Gordon.
Kennedy, T. J., mc —, no certificate, Haleburg.
Lewis, James Langdon, mc Atlanta 84, cb 85, Bush.
McElvin, Ples, (illegal), Ashford.
McElvin, —, (illegal), Lawrenceville.
Oats, Wyatt Stephen, mc —, cb 91, Headland.
Pate, Walter Eugene, mc Atlanta 93, cb 95, Ashford.
Stokes, James Eldridge, mc Eclectic —, cb, Kinsey.
Sporman, Chas. F., mc Alabama 87, cb 89, Headland.
Stapleton, R. B., mc Louisiana 85, cb 91, Dothan.
Vann, J. K., mc —, no certificate, Holesburg.
Weems, J. S., mc Alabama 93, (illegal), Lawrenceville.
Young, Henry Monroe, mc Alabama 93, cb 93. Dothan
Yarbrough, John T., mc Alabama 92, cb 92, Columbia.
Total 18.

Moved into the county—J. L. Ellis, from Louisville, Barbour county, to Dothan; M. S. Davie, Jr., from Dale county to Dothan; M. L. Stough, from Taylor, Geneva county, to Haleburg; P. T. Fleming, Clintonville, Coffee county, to Dothan.

Moved out of the county—P. T. Fleming, from Dothan to Enterprise, Coffee county; R. B. Stapleton, from Dothan to Hattiesburg, Miss.

Examinations—LeRoy Burdershaw, certificate granted.

*JACKSON COUNTY MEDICAL SOCIETY—Mobile, 1882.

OFFICERS.

President, W. L. McLendon; Vice-President, T. E. Callan; Secretary, Andrew Boyd; Treasurer, James P. Rorex; Health Officer, T. E. Callan. Censors—J. W. Knowlton, E. R. Smith, W. C. Sanders, W. C. Maples, G. W. Foster.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Blakemore, Andrew N., mc univ Tennessee 80, cb 82, Larkinsville.
Boyd, Andrew, mc phy and surg Baltimore 88, cb 88, Scottsboro.
Boggess, John W., mc Vanderbilt 92, cb Marshall 93, Woodville.
Callan, Thomas E., mc Alabama 94, cb DeKalb 94, Fackler.
Foster, George Whitfield, mc Nashville 82, cb 82, Stevenson.
Hayes, George Thomas, mc Atlanta 89, cb DeKalb 89, Hollywood.
Knowlton, James W., mc univ Vanderbilt 83, cb 83, Paint Rock.
Maples, William Caswell, mc univ Tennessee 81, cb Madison 81, Scottsboro.
McLendon, William La Fayette, mc univ Alabama 94, cb 94, Hollywood.
Rorex, James Polk, mc Alabama 75, cb 82, Scottsboro.
Sanders, Walter C., mc Memphis 91, cb Madison 91, Stevenson.
Smith, Eugene Robinett, mc univ Vanderbilt 85, cb 89, Dutton.
Total 12.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Adkins, Charles William, mc Louisville 68, cb 84, Langston.
Brewer, Joseph M., mc univ Vanderbilt 82, cb 82, Trenton.
Gettes, Henry Franklin, ng, cb 82, Holly Tree.
Grant, Felix, ng, cb 82, Larkins.
Harralson, Jefferson B., mc Memphis 87, cb DeKalb 88, Langston.
Helton, Thomas H., ng, cb 82, Caffey's Store.
James, William, mc univ Vanderbilt 82, cb 90, Bolivar.
Johnston, James Robert, ng, cb DeKalb 82, Kirby's Creek.
Lee, Elisha L., mc unv Vanderbilt 73, cb 82, Bridgeport.
Moon, Emmett K., mc Chattanooga 82, cb Marshall 93, Bridgeport.
Mason, William, mc univ Transylvania 46, cb 82, Fabius.
McAfee, Green Pryor, ng, cb 82, Lime Rock.
McCord, John Harvey, ng, cb 82, Section.
Reid, James R., mc Alabama 93, cb 93, Estills.
Smith, Barton Brown, Sr., mc Nashville 67, cb 83, Larkinsville.
Smith, William Barton, ng, cb 82, Aspel.
Spiller, William Kingston, mc Louisville 74, cb 84, Bridgeport.
Tate, George T., mc univ Vanderbilt 95, cb Marshall 96, Fabius.
Zurmehly, Samuel Lutz, mc Miami 90, cb 90, Bridgeport.
Total 19.

*NOTE.—As no report has been received from Jackson county this year the report for 1899 is here reproduced.

JEFFERSON COUNTY MEDICAL SOCIETY—Birmingham, 1887.

OFFICERS.

President, Wyatt Heflin; Vice-President, J. D. Heacock; Secretary, W. M. Jordan; Treasurer, R. V. Mobly; Health Officer, J. W. Barclay. Censors—E. H. Sholl, L. G. Woodson, Cunningham Wilson, E. P. Riggs, A. T. Henley.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Abernathy, Jones Cadwalader, mc univ Louisville 59, cb Marengo 78, Birmingham.

Alexander, Howard Augustus, mc S. of M. Kentucky 75, cb Macon 78, Birmingham.

Bandy, E. C., —— —— —, cb ——, Bessemer.

Bankston, Richard Coopender, mc univ Tulane 88, cb 96, Birmingham.

Barclay, John Wyeth, mc Jefferson 69, cb Madison 78, Birmingham.

Berry, Robert Alford, mc univ Virginia 82, cb 85, Birmingham.

Berry, William Thomson, mc univ Vanderbilt 99, cb 99, Birmingham.

Brown, George Summers, mc Jefferson 85, cb 87, Birmingham.

Brown, George Washington, mc Atlanta 77, cb 78, Pratt City.

Brown, Thomas Jefferson, mc univ Virginia 85, cb 85, Pratt City.

Barrett, Nathaniel Aldridge, mc univ Vanderbilt 86, cb Lauderdale 86, East Lake.

Blanks, John Harrison, mc univ Tennessee 91, state board 98, Birmingham.

Baker, Dicia Houston, mc Womens Memorial, Cincinnati 98, cb 99, Birmingham.

Caffee, Samuel Richardson, mc univ Missouri 81, cb Tuscaloosa 81, Birmingham.

Carter, James Watson, mc univ Nashville 74, cb Limestone 78, Bessemer.

Chapman, George Clarence, mc univ Vanderbilt 90, cb Monroe 90, Birmingham.

Copeland, Benjamin Grigsby, mc Jefferson 83, cb Limestone 83, Birmingham.

Cotten, Robert, mc univ Tulane 67, cb 86, Birmingham.

Collins, James Alexander, mc univ Louisville 91, cb Cullman 91, Warrior.

Collins, Milton Homer, mc univ Tennessee 84, cb 84, Birmingham.
Clark, Nat G., mc Birmingham 96, cb 98, Ensley.
Compton, F. H., mc —, cb 1900, Birmingham.
Crowe, Philip Patterson, mc univ Nashville 77, cb St. Clair 78, Brookside.
Coulbourn, Joseph Thomas, mc univ Maryland 86, state board 86, Birmingham.
Cunningham, Russell McWhorter, mc Bellevue 79, cb 83, Ensley.
Dabney, John Davis, mc univ Washington, Baltimore 72, cb 90, Birmingham.
Davis, John Daniel Sinkler, mc Georgia 79, cb St. Clair 79, Birmingham.
Davis, William Elias Brownlee, mc Bellevue 84, cb 84, Birmingham.
Drennen, Charles, mc Alabama 72, cb Blount 78, Birmingham.
Drennen, Daniel Charles, mc Alabama 94, cb 94, Birmingham.
Due, Malvern Nicholas, mc phys and surg, New York 89, cb Montgomery 88, Birmingham.
Duncan, Joseph Johnston, mc univ Louisville 86, state board 86, Birmingham.
Dunlap, Perry Gabriel, mc univ Vanderbilt 81, cb St. Clair 81, Adger.
Dedman, James E., mc univ Tennessee 91, cb 98, Birmingham.
Edwards, Joseph H., mc Birmingham 97, cb 97, Wylam.
Fox, Bertram Arthur, mc Birmingham 96, cb 96, Birmingham.
Gibson, Jefferson Demetrius, mc Alabama 87, cb Tusculoosa 87, Birmingham.
Glass, Edward Taylor, mc univ Vanderbilt 90, cb 90, Birmingham.
Harkness, Robert B., mc univ Tulane 97, cb Tuscaloosa 97, Newcastle.
Hamrick, Robert Hampton, mc Atlanta 95, cb Blount 96, Pratt City.
Harwell, James Thomas, mc Atlanta Southern 83, cb Cullman 83, Ishkooda.
Hawkins, Joseph Povis, mc univ Tulane 82, cb 82 Avondale.
Hawkins, Richard Nathaniel, mc Miami, Ohio 67, cb Shelby 87, Birmingham.
Heacock, Joseph Davis, mc univ Tulane 92, cb Talladega 92, East Lake.
Heflin, Howard Towles, mc univ Maryland 93, cb Clay 94, Bessemer.
Heflin, Wyatt, mc Jefferson 84, cb Randolph 85, Birmingham.
Henley, Albert Thomas, mc univ New York 69, cb Hale 78, Birmingham.
Hirst, Jesse Watson, mc Jefferson 90, cb 95, Thomas.
Hogan, George Archibald, mc Birmingham 96, cb 96, Birmingham.

Howard, John Wesley, mc Atlanta 91, ch Shelby 91, Irondale.

Jenkins, Luckie Andrew, mc Alabama 89, cb Wilcox 89, Cardiff.

Jernigan, Charles Henry, mc Jefferson 55, cb Bullock 80, Birmingham.

Johnston, Hardee, mc univ Virginia 95, cb 96, Birmingham.

Jones, Capers Capehart, mc univ med and surg, Philadelphia 70, cb Wilcox 79, East Lake.

Jones, Devotie Davis, mc univ Maryland 72, cb Lowndes 72, Woodlawn.

Jones, Edgar Allen, mc Birmingham 98, cb 98, Birmingham.

Jones, Robert Arthur, mc univ Louisville 86, cb 86, Birmingham.

Jordan, William Mudd, mc phys and surg, New York 95, cb 95, Birmingham.

Killough, James Monroe, mc S. of M. Kentucky 87, cb 87, Huffman.

Klebs, Theodore Alexander, mc Tulane 76, cb 87, Birmingham.

Lacy, Edward Parish, mc univ Vanderbilt 83, cb Shelby 83, Bessemer.

Ledbetter, Samuel Leonidas, mc univ Louisville 79, cb 79, Birmingham.

LeGrand, John Clarke, mc Atlanta 80, cb 81, Birmingham.

Lewis, Francis Porcher, mc South Carolina 76, cb 80, Coalburg.

Lewis, James Marshall, mc univ Vanderbilt 87, cb 88, Birmingham.

Luckie, James Buckner, mc univ Pennsylvania 55, cb 78, Birmingham.

Martin, Henry Lewis, mc univ Vanderbilt 81, cb Madison 81, Avondale.

Mason, James Monroe, mc univ Tulane 97, cb 99, Birmingham.

McAdory, Wellington Prude, mc univ Virginia 97, cb 99, Birmingham.

McCarty, James Henry, mc Atlanta 80, cb 83, Birmingham.

Mobley, Robert Vernon, mc Alabama 89, cb Clarke 89, Birmingham.

Moore, John Austin, mc phys and surg, Baltimore 85, cb Blount 85, Birmingham.

Morris, Edward Watts, mc univ Virginia 85, cg 87, Birmingham.

Morris, Lewis Coleman, mc univ Virginia 92, cb 93, Birmingham.

Odom, J. I., mc —, cb —, East Lake.

Parke, Thomas Duke, mc univ New York 79, cb Dallas 84, Birmingham.

Payne, John, mc Jefferson 86, cb Shelby 86, Hillman.

Perry, Samuel, mc South Carolina 54, cb Perry 78, Birmingham.

Pressly, Henry Erskine, mc univ New York 99, cb 99, Birmingham.

Prince, Francis Marion, mc Jefferson 49, cb 78 Bessemer.

Ransom, William Walter, mc univ Vanderbilt 88, cb 88, Birmingham.

Riggs, Edward Powell, mc phys and surg, Baltimore 81, cb Dallas 81, Birmingham.

Rittenberry, Baxter, mc Birmingham 99, cb 99, Birmingham.

Robbins, Jesse Elbert, mc Atlanta 86, cb 86, Brookside.

Robertson, Thaddeus Lindley, mc Jefferson 61, cb Calhoun 81, Birmingham.

Robinson, Elisha Milton, mc univ Tulane 85, cb Blount 86, Birmingham.

Robinson, Thomas Franklin, mc univ Nashville 80, cb Blount 80, Bessemer.

Rogers, Mack, mc Alabama 89, cb Conecuh 89, Birmingham.

Rosamond, William Lucius, mc S. of M. Kentucky 91, cb Walker 91, Ensley.

Rosser, Henry Nollner, mc Atlanta 69, cb Dallas 79, Birmingham.

Sellers, Ira Jackson, mc univ Vanderbilt 97, cb 97, Avondale.

Sexton, Charles Richard, mc univ Tulane 75, cb Tuscaloosa 78, Birmingham.

Shoemaker, Worcester Ney, mc Columbus 78, cb 81, Birmingham.

Sholl, Edward Henry, mc univ Pennsylvania 56, cb Sumter 78, Birmingham.

Steves, Henry Fordyce, ng, state board 87, Gate City.

Stubbs, George Hamilton, mc Atlanta Southern 95, cb 97, Birmingham.

Talley, Dyer Findley, mc univ Tulane 92, cb 92, Birmingham.

Walton, Frank, mc univ Vanderbilt 99, state board 99, Blossburg.

Ward, Henry Silas, mc univ Nashville 98, cb Blount 99, Birmingham.

Whaley, Lewis, mc Atlanta 73, cb Blount 78, Birmingham.

Whelan, Charles, mc Alabama 96, cb 96, Birmingham.

Wikle, Luther Lafayette, mc univ Tennessee 88, cb 88, Village Springs.

Wilder, William Hinton, mc univ New York 91, cb 91, Birmingham.

Wilson, Cunningham, mc univ Pennsylvania 84, cb 84, Birmingham.

Wood, Winston Cass, mc Atlanta 81, cb 81, Dolomite.

Woodson, Lewis Greene, mc univ Maryland 86, cb 88, Birmingham.

Wyman, Benjamin Leonidas, mc univ New York 78-79, cb Tuscaloosa 82, Birmingham.

Total 107.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Acton, William Henser, mc univ Vanderbilt 88, cb Lauderdale 88, Leeds.

Ball, John Calhoun, mc Atlanta 59, cb Calhoun 87, Avondale.

Ballard, Asa Nathaniel, mc Pulte (homoepathic) 76, cb DeKalb 86, Birmingham.

Berry, James Crawford, mc South Carolina 95, cb 95, Oxmoor.

Benton, John M., mc univ Maryland 90, cb 97, Birmingham.

Brown, Arthur McKinnon (col.), mc Ann Arbor 91, cb 91, Birmingham.

Burnum, Henry Clay, mc phys and surg, Baltimore 92, cb Blount 93, Chalkville.

Byars, Henry Hayden, mc S. of M. Kentucky 92, cb Perry 92, Warrior.

Clapp, William Wesley, mc Cleveland (homoepathic) 90, cb DeKalb 90, Birmingham.

Clayton, Benjamin Lawrence, mc univ Virginia 82, cb St. Clair 83, Ayers.

Cross, Samuel Mardis, mc Georgia 60, cb 78, Woodlawn.

Cross, Thomas Winston, mc univ Nashville 87, cb 87, Bessemer.

Davidson, James Francis, mc Alabama 87, cb 87, Birmingham.

Dozier, Oliver Thomas, mc Atlanta 74, cb 97, Birmingham.

Edwards, Robert Smith, mc Atlanta 71, cb 78, Trussville.

Ellis, George Washington, ng, cb 78, Morris.

Ellsberry, John Payne, mc univ Virginia 60, cb Montgomery 84, Powderly.

Gamble, John Wesley, (old law), ng, cb 78, Birmingham.

Goin, John Burt, (col.), mc Meharry 90, cb 90, Birmingham.

Greene, Robert Smith, mc Atlanta 60, cb 78, Greene's Station.

Griggs, John Gardner, mc univ Pennsylvania 63, cb Macon 86, Birmingham.

Hancock, James Francis, mc univ Louisville 88, cb Walker 88, Toadwine.

Hausman, Frank, mc Alabama 93, cb Tuscaloosa 93, Warrior.

Hawkins, Elijah Alexis, mc Atlanta Southern 88, cb Walker 89, Partridge.

Hayes, William Isaac, mc Atlanta Southern 85, cb Walker —, Powderly.

Heddleston, James Lawrence, mc South Carolina 55, cb Hale 87, Woodlawn.

Hill, Charles Lowery, mc univ Tennessee 83, cb 88, Elliott.

Holloway, Young Edwin, mc Miami, Ohio 72, cb Cullman 85, Birmingham.

Jones, John Columbus, mc univ Tulane 85, cb 88, Johns.

Kinette, Jackson Flavius, mc Georgia Eclectic Med. and Surg. 92, cb Shelby 92, Brighton.

Lathem, L. Middleton, mc Alabama 92, cb Bibb 92, Ensley.

Lathem, Sinkler Nathaniel, mc Birmingham 98, cb St. Clair 98, Blossburg.

Love, William Jones, mc Alabama 93, cb Morgan 93, Mt. Pinson.

Mason, Ulysses Grant, (col.), mc Meharry 95, cb 95, Birmingham.

Means, George Evins, mc univ Tulane 89, cb 94, Bessemer.

Mitchell, R. L., mc —, cb —, Laban.

McClain, Frederick Augustus, mc univ Louisville 94, cb 94, Earnest.

McGlathery, Fountain Scott, mc univ Vanderbilt 82, cb Morgan 82, Woodlawn.

Miller, James Melville, mc Alabama 84, cb Walker 88, Blossburg.

Miller, James Whitfield, mc univ Vanderbilt 92, cb 92, Wylam.

Oliver, William Marmaduke, mc Alabama 72, cb 78, Jonesboro.

Oliver, Hillary Francis, mc univ Pennsylvania 59, cb Butler 81, Woodlawn.

Ragsdale, Milton Columbus, mc Georgia 78, cb 78, McCalla.

Roberts, Martin (old law), ng, cb 80, Warrior.

Robinson, Jasper Bennet, mc univ Vanderbilt 69, cb St. Clair 78, Woodlawn.

Roper, William Elliott, mc univ Louisville 83, cb Shelby 88, Belle Sumter.

Russell, Ralph Morgan, mc Bellevue 88, cb Etowah 89, Birmingham.

Scott, Joseph Newton, mc Alabama 87, cb 87, Birmingham.

Scott, Andrew Lafayette, mc Barnes, St. Louis 96, cb 96, Birmingham.

Shepperd, Lewis Watson, mc phys and surg, Baltimore 85, cb St. Clair 89, Bessemer.

Smith, Robert Lee, mc univ Louisville 91, cb —, Toadvine.

Spencer, Lucien Allen, mc Miami, Ohio 85, cb 85, Besemer.

Statum, Job Nelson, mc Atlanta Southern 88, cb 88, Blossburg.

Trainer, Edward William, ng, cb Marshall 85, Pratt City.

Tubbs, James, mc Memphis 94, cb Walker 94, Bessemer.

Waldrop, R. W., mc Louisville 96, cb 97, Bessemer.

Washington, Samuel Somerville Hawkins, (col.), mc univ Howard 86, cb 87, Birmingham.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Acton, William Henser, mc univ Vanderbilt 88, cb Lauderdale 88, Leeds.

Ball, John Calhoun, mc Atlanta 59, cb Calhoun 87, Avondale.

Ballard, Asa Nathaniel, mc Pulte (homoepathic) 76, cb DeKalb 86, Birmingham.

Berry, James Crawford, mc South Carolina 95, cb 95, Oxmoor.

Benton, John M., mc univ Maryland 90, cb 97, Birmingham.

Brown, Arthur McKinnon (col.), mc Ann Arbor 91, cb 91, Birmingham.

Burnum, Henry Clay, mc phys and surg, Baltimore 92, cb Blount 93, Chalkville.

Byars, Henry Hayden, mc S. of M. Kentucky 92, cb Perry 92, Warrior.

Clapp, William Wesley, mc Cleveland (homoepathic) 90, cb DeKalb 90, Birmingham.

Clayton, Benjamin Lawrence, mc univ Virginia 82, cb St. Clair 83, Ayers.

Cross, Samuel Mardis, mc Georgia 60, cb 78, Woodlawn.

Cross, Thomas Winston, mc univ Nashville 87, cb 87, Bessemer.

Davidson, James Francis, mc Alabama 87, cb 87, Birmingham.

Dozier, Oliver Thomas, mc Atlanta 74, cb 97, Birmingham.

Edwards, Robert Smith, mc Atlanta 71, cb 78, Trussville.

Ellis, George Washington, ng, cb 78, Morris.

Ellsberry, John Payne, mc univ Virginia 60, cb Montgomery 84, Powderly.

Gamble, John Wesley, (old law), ng, cb 78, Birmingham.

Goin, John Burt, (col.), mc Meharry 90, cb 90, Birmingham.

Greene, Robert Smith, mc Atlanta 60, cb 78, Greene's Station.

Griggs, John Gardner, mc univ Pennsylvania 63, cb Macon 86, Birmingham.

Hancock, James Francis, mc univ Louisville 88, cb Walker 88, Toadwine.

Hausman, Frank, mc Alabama 93, cb Tuscaloosa 93, Warrior.

Hawkins, Elijah Alexis, mc Atlanta Southern 88, cb Walker 89, Partridge.

Hayes, William Isaac, mc Atlanta Southern 85, cb Walker —, Powderly.

Heddleston, James Lawrence, mc South Carolina 55, cb Hale 87, Woodlawn.

Hill, Charles Lowery, mc univ Tennessee 83, cb 88, Elliott.

Holloway, Young Edwin, mc Miami, Ohio 72, cb Cullman 85, Birmingham.

Jones, John Columbus, mc univ Tulane 85, cb 88, Johns.

Kinette, Jackson Flavius, mc Georgia Eclectic Med. and Surg. 92, cb Shelby 92, Brighton.

Lathem, L. Middleton, mc Alabama 92, cb Bibb 92, Ensley.

Lathem, Sinkler Nathaniel, mc Birmingham 98, cb St. Clair 98, Blossburg.

Love, William Jones, mc Alabama 93, cb Morgan 93, Mt. Pinson.

Mason, Ulysses Grant, (col.), mc Meharry 95, cb 95, Birmingham.

Means, George Evins, mc univ Tulane 89, cb 94, Bessemer.

Mitchell, R. L., mc —, cb —, Laban.

McClain, Frederick Augustus, mc univ Louisville 94, cb 94, Earnest.

McGlathery, Fountain Scott, mc univ Vanderbilt 82, cb Morgan 82, Woodlawn.

Miller, James Melville, mc Alabama 84, cb Walker 88, Blossburg.

Miller, James Whitfield, mc univ Vanderbilt 92, cb 92, Wylam.

Oliver, William Marmaduke, mc Alabama 72, cb 78, Jonesboro.

Oliver, Hillary Francis, mc univ Pennsylvania 59, cb Butler 81, Woodlawn.

Ragsdale, Milton Columbus, mc Georgia 78, cb 78, McCalla.

Roberts, Martin (old law), ng, cb 80, Warrior.

Robinson, Jasper Bennet, mc univ Vanderbilt 69, cb St. Clair 78, Woodlawn.

Roper, William Elliott, mc univ Louisville 83, cb Shelby 88, Belle Sumter.

Russell, Ralph Morgan, mc Bellevue 88, cb Etowah 89, Birmingham.

Scott, Joseph Newton, mc Alabama 87, cb 87, Birmingham.

Scott, Andrew Lafayette, mc Barnes, St. Louis 96, cb 96, Birmingham.

Shepperd, Lewis Watson, mc phys and surg, Baltimore 85, cb St. Clair 89, Bessemer.

Smith, Robert Lee, mc univ Louisville 91, cb —, Toadvine.

Spencer, Lucien Allen, mc Miami, Ohio 85, cb 85, Besemer.

Statum, Job Nelson, mc Atlanta Southern 88, cb 88, Blossburg.

Trainer, Edward William, ng, cb Marshall 85, Pratt City.

Tubbs, James, mc Memphis 94, cb Walker 94, Bessemer.

Waldrop, R. W., mc Louisville 96, cb 97, Bessemer.

Washington, Samuel Somerville Hawkins, (col.), mc univ Howard 86, cb 87, Birmingham.

Whissenant, Lewis Daniel, ng, cb 78, Morris.
Wilkerson, George Hiram, (col.), mc Meharry 97, cb 97, Birmingham.
Total, 59.

LAMAR COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, G. C. Burns; Vice-President, T. B. Woods; Secretary, D. C. Morton; Treasurer, D. C. Morton; Health Officer, W. F. Elliott. Censors—R. J. Redden, G. C. Burns, J. C. Buckalew, T. B. Woods, D. C. Morton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Burns, George Caruthers, mc Ill. Health University 96, cb 78, Vernon.
Buckalew, Judge C., mc Grant 73, cb Fayette 98, Sulligent.
Elliott, William Farris, mc univ Louisville (one course) 57, cb 77, Crews.
Morton, William Locks, mc univ Louisiana 74, cb 77, Vernon.
Morton, Dick Cameron, mc Memphis Hospital 97, cb 97, Vernon.
Redden, Robert James, mc Baltimore 77, cb 77, Sulligent.
Turner, Berry Eddley, mc Memphis Hospital 97, cb 97, Richards.
Woods, Thomas Bailey, mc univ Louisville 73, cb Fayette, Bell.
Total 8.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Armstrong, Warren, ng, cb 80, Detroit.
Black, William Anderson, mc Memphis Hospital 95, cb Fayette 95, Cawoon.
Blakeney, Lewis Columbus, mc Alabama 73, cb 77, Millport.
Box, Daniel William, mc Alabama 85, cb 85, Malloy.
Bronyan, James A., mc univ Louisville 92, cb 92, Kingsville.
Buckalew, Ansel Milbran, mc univ Louisville 70, cb Calhoun 86, Crews.
Collier, Scott, ng, cb 77, Crews.
Collins, Francis Alexander, mc Memphis Hospital 92, cb 92, Blowhorn.
Collins, George Jackson, mc Alabama 74, cb Fayette 84, Kennedy.
Hollis, Daniel Dixie, mc phy and surg Baltimore 84, cb 84, Sulligent.
Horton, J. K., mc Memphis Hospital 95, cb 96, Kennedy.
Kennedy, John Oscar, mc Alabama 82, cb 82, Kennedy.

Kennedy, William Henderson, mc univ Nashville 57, cb 77, Kennedy.
Owens, A. C., (illegal), ng, Crews.
Vaughn, George Washington, ng, Alabama, (2 courses), cb Marion 88, Wofford.
Total 15.

Moved out of the county—John A. Jackson, from Sulligent to Gutman, Miss.; James T. Seay, from Fernbank to Pratt City.

Examinations—K. J. Barrentine, mc Barnes 99, certificate refused; John A. Jackson, mc Memphis Hospital 99, certificate granted; S. B. Flynt, mc Memphis Hospital 99, certificate refused; James E. Seay, mc Bellevue 99, certificate granted; Silas G. Barksdale, mc Memphis Hospital 99, certificate granted.

LAUDERDALE COUNTY SOCIETY—Tuscaloosa, 1887.

OFFICERS.

President, C. M. Watson; Vice-President, L. F. Duckett; Secretary, P. I. Price; Treasurer, P. I. Price; Health Officer, P. I. Price, Censors—J. M. Peerson, W. J. Kernochan, J. A. Pate, L. W. Arnold, P. I. Price.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Arnold, Leonard Waring, mc Ohio 77, cb 87, Florence.
Crow, Calvin Augustus, mc Jefferson 54, cb 78, Florence.,
Duckett, Levi Fowler, Jr., mc univ Nashville 90, cb 94, Cloverdale.
Hardaway, William Epps, mc univ Nashville 65, cb87, Florence.
Kennedy, Hiram Raleigh, mc univ Louisville 79, cb 81, Green Hill.
Kernochan, William Jones, mc univ Vanderbilt 79, cb 88, Florence.
Moody, Henry Altamont, mc univ Louisville 65, cb 87, Bailey Springs.
Pate, Jesse Americus, mc univ Louisville 70, cb 87, Rogersville.
Peerson, James M., mc univ Vanderbilt 90, cb 91, Florence.
Powers, Alexander Hamilton, mc univ Louisville, 71, cb —, Waterloo.
Price, William Mason, mc univ Nashville 64, cb 87, Florence.
Price, Perry Isaac, mc univ Vanderbilt, 86, cb 87, Florence.
Scott, George Barbiere, mc Jefferson 90, cb 90, Florence.
Watson, Charles McAlpine, mc univ Louisiana 81, cb Greene 81, Florence.
Total, 14.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Belue, John Columbus, ng, cb 90, Robersville.
Bramlett, William M., mc univ Nashville 60, cb 87, Florence.
Boyd, P. S., (homeopathic) mc —— —, cb —, Florence.
Henderson, A. H., mc univ Nashville 76, cb 87, Florence.
Jones, John P., mc — —, cb —, Lexington.
Lee, J. W., —— —, cb —, Waterloo.
Wheeler, Charles N., ng, cb —, Florence.
Williams, George, mc —— —, cb —, Center Star.

LAWRENCE COUNTY MEDICAL SOCIETY—Birmingham 1877.

OFFICERS.

President, H. B. Burkett; Vice-President, J. W. Edwards; Secretary, W. J. McMahon; Treasurer, W. J. McMahon; Health Officer, W. J. McMahon. Censors—H. B Burkett, J. W. Edwards, J. R. Howell, L. W. Houston, I. W. Fennell.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Burkett, Henry Bascomb, mc phys and surg 78, cb 78, Hillsboro.
Chenault, Calvin Sidney, mc Birmingham 97, cb 97, Mt. Hope.
Edwards, John Wilson, mc Louisville 69, cb 79, Courtland.
Etheridge, Benjamin Franklin, mc Memphis 86, cb 86, Town Creek.
Fennell, Isham Watkins, mc univ Nashville 67, cb 78, Courtland.
Gibson, Frank Demetrius, mc univ Nashville 90, cb 92, Moulton.
Houston, Leonidas Walton, mc univ Nashville 77, cb 78, Town Creek.
Howell, John Robert, mc univ Memphis 88, cb 94, Hatton.
Masterson, John Thomas, mc med. and surg. 72, cb 78, Moulton.
McDonald, John Robert, mc univ Nashville 67, cb Limestone 78, Courtland.
McMahon, William Jack, mc Long Island 60, S. of M. New Orleans 61, cb 78, Courtland.
Pitts, James Thomas, mc Louisville 86, cb 94, Hillsboro.
Roberson, James Robert, mc Birmingham 98, cb 98, Mt. Hope.
Simms, Edgar Thomas, mc univ Pennsylvania 69, cb 98, Hillsboro.
Total, 14.

Honorary Members.

Porter, Reese Benjamin, mc univ Nashville 67, cb 78, Town Creek.
Rand, Edgar, mc Alabama 78, cb 78, Leighton.
Total, 2.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Burnett, Wm. D., mc —, cb —, Bashams Gap.
Farned, Abner, mc —, cb —, Landersville.
Jones, M. S., mc —, cb —, Mt. Home.
Total, 3.

Moved into the county—Abner Farned, from —— to Landersville.

Moved out of the county—Abner Farned, from Landersville to Franklin county.

Deaths—John Swan Houston, Dec. 28, 1899, Moulton.

LEE COUNTY MEDICAL SOCIETY—Huntsville, 1880.

OFFICERS.

President, A. H. Reed; Vice-President, J. R. Harmer; Secretary, J. R. Harmer; Health Officer, Warren B. Watkins. Censors—A. H. Reed, J. M. Watkins, A. B. Bennett, J. G. Palmer, W. B. Watkins, C. B. McCoy, O. M. Steadham.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bennett, Abijah Benjamin, mc phy and surg Baltimore 81, cb 81, Opelika.
Bedell, Robert Bruce, mc South Carolina 54, cb 81, Auburn.
Drake, John Hodge, Sr., mc Atlanta 67, cb 81, Auburn.
Harmer, Joseph Randolph, mc Harvard 73, cb 93, Opelika.
McCoy, Charles Breckinridge, mc phy and surg Baltimore 82, cb 82, Opelika.
Palmer, Jesse Gray, mc phy and surg Baltimore 84, cb 84, Opelika.
Reed, Andrew Hamil, mc Georgia 58, cb 81, Opelika.
Steadham, O. M., mc Chattanooga 84, cb Clay 86, Auburn.
Shelton, M. D., mc univ Nashville 64, cb 81, Salem.
Watkins, John Marion, mc Louisiana and Baltimore 71, cb Tallapoosa 87, Opelika.
Watkins, Warren, mc Bellevue Hospital 97, cb 98, Oeplika.
Wheeler, William Raleigh, mc Atlanta —, cb —, Bullock.
Total, 12.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Bloodworth, Wiley Washington, mc Nashville 69, cb 81, Phoenix City.
Floyd, Ashly, mc univ Louisiana 89, cb 95, Phoenix City.

Foreman, Arthur Levin, mc Jefferson 69, cb 81, Loachapoka.
Stowe, I. N., mc Georgia Eclectic 93, cb 95, Opelika.
Total, 4.

Moved into the county—W. R. Weedon, to —— from Eufaula.

Moved out of the county—J. H. Drake, Jr., from Opelika to parts unknown; J. M. Glass, from Opelika to parts unknown.

Examinations—Adelbert F. Crane, mc Detroit, cb 99, certificate granted; Charles F. Sterling, mc Pulte, Ohio, cb 99, certificate granted.

Deaths—Henry Harrison Johnson, Loachapoka.

LIMESTONE COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, Theo. Westmoreland; Vice-President, ———; Secretary, T. C. Jones; Treasurer, G. A. Williams; Health Officer, N. D. Richardson. Censors—T. C. Jones, W. J. Hagan, G. A. Williams.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Crutcher, John Sims, mc univ Vanderbilt 89, cb 89, Athens.
Dupree, William James, mc univ Vanderbilt 76, cb 79, Westmoreland.
Hagan, William James, mc Jefferson 84, cb 84 Athens.
Jones, Thos. Crittenden, mc univ Louisville 76, cb Lauderdale 78, Athens.
Hoffman, John Crittenden, mc Jefferson 58, cb 77, Athens.
Lindsey, Eugene C., mc univ Vanderbilt 95, cb 1900, Mooresville.
Moore, Elish Dixon, old law 67, cb 78, Athens.
Pettus, Benton Sanders, mc univ Vanderbilt 92, cb 92 Pettusville.
Pettus, Joseph Albert, mc univ Nashville 67, cb 77, Elkmont.
Rankin, James Caffield Mitchell, mc univ Nashville 58, cb 78, Belle Mina.
Richardson, N. D., mc univ Vanderbilt 91, cb 1900, Athens.
Westmoreland, Theophilus, mc univ Nashville 56, cb 79, Athens.
Wilkerson, Milton Roil, mc univ Nashville 80, cb 98, Westmoreland.
Williams, George Allen, mc univ Nashville 80, cb 81, Elkmont.
York, Seaborn Edward, mc univ Louisville 78, cb 84, Athens.
Wilson, Felix Grady, mc univ Nashville 65, cb 77, Athens.
Total, 16.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Carter, James Jackson, mc —, cb 78, Petty.
Collins, James Marshall, mc —, cb 78, Cartwright.

Gaston, Alfred Langdon, mc univ Nashville 91, cb 91, Gilbertsborough.
Hill, Henry Willis, mc univ New York 49, cb 77, Mooresville.
Hill, James M., mc univ Vanderbilt 84, cb 84, Mooresville.
Frierson, J. G., mc —, cb —, Rowland.
Kyle, William B., mc Mobile 89, cb 89, Lentzville.
Total 7.

Moved into the county—William B. Kyle, from Lauderdale county to Lentzville; Frierson, J. G., from Gainsville, Texas, to Rowland.

LOWNDES COUNTY MEDICAL SOCIETY—Mobile, 1876.

OFFICERS.

President, W. P. Russell; Vice-President, N. G. James; Secretary, Frank Shackelford; Treasurer, Frank Shackelford; Health Officer, W. P. Russell. Censors—S. W. Purifoy, A. D. Coleman, W. P. Russell, W. B. Crum, M. H. Hagood.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Coleman, Aurelius Daniel, mc Alabama 80, cb 85, Mt. Willing.
Crum, William Barton, mc Alabama 88, cb 88, Ft. Deposit.
Dilburn, Samuel George, mc Alabama 75, cb 78, Braggs.
Hagood, Middleton Howard, mc Alabama 98, cb 98, Mt. Willing.
Harrison, King W., mc Alabama 96, cb 97, Palmyra.
James, Norman Gilchrist, mc Alabama 98, cb 98, Hayneville.
Marlette, Cyrus Edmund, mc Louisville 80, cb 91, Hayneville.
Powell, Clifton William, mc Alabama 90, cb 90, Lowndesboro.
Powell, Clifton Woodruff, mc Alabama 91, cb 91, Letohatchie.
Powell, George Norman, mc Alabama 96, cb 97, Davenport.
Purifoy, Seaborn William, mc S. of M. Kentucky 94, cb Tuscaloosa 94, Lowndesboro.
Russell, William Payne, mc Atlanta 91, cb 91, Hayneville.
Shackelford, Frank, mc Alabama 98, cb 98, Letohatchie.
Total, 13.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Carr, George Washington Lafayette, mc univ Pennsylvania 55, cb 78, Ft. Deposit.
Cilley, Philip Noble, mc univ Louisville 48, cb 78 Lowndesboro.
Bruner, Oliver Glenn, mc Alabama 76, cb 78, Ft. Deposit.

Dryer, Thomas Edmond, mc Alabama 86, cb Macon 86, Huntsville.
Erskine, Albert Russell, mc univ Pennsylvania 51, cb 78, Huntsville.
Edelman, Louis, mc Kiningsburg 85, Curtis Institute 91, cb Limestone 97, Huntsville.
Fletcher, Richard Matthew, Sr., mc univ Pennsylvania 54, cb 78, Madison.
Fletcher, Richard Matthew, Jr., mc univ Alabama 94, cb 94, Madison.
Graham, Benjamin Emmett, mc univ of the South Sewanee 94, cb Jackson 94, Gurley.
Haden, William Wright, mc univ Vanderbilt 90, cb 92, Owens X Roads.
Hampton, J. P., mc —, cb 78, Meridianville.
Haney, Julius Tilman, mc Alabama 91, cb Colbert 92, Madison.
Hefflefinger, Marion Lorain, mc S of M Kentucky 94, cb 95, Huntsville.
Lowry, Saml. Hickman, mc Bellevue 73, cb 78, Huntville.
McKelvy, Wm. G., mc —, cb 88, Dallas Mills.
McDonell, Henry, mc univ Louisiana 68, cb 78, Huntsville.
May, F. H., mc univ South 99, cb Marion 99, Huntsville.
Patton, Irvine W., mc univ Virginia 95, cb 95, Huntsville.
Pettus, Wm. David, mc univ Vanderbilt 68, cb 78, Rep.
Pettus, Claude, mc univ Vanderbilt 96, cb Limestone 96, Rep.
Pride, William T., mc univ Tulane 95, cb 95, Madison.
Westmoreland, Hawkins D., mc univ Vanderbilt 92, cb Limestone 93, Huntsville.
Wheeler, Wm. Camp, mc univ Bellevue 62, cb Colbert 81, Huntsville.
Williamson, Edwin Oliver, mc Chattanooga 98, cb 98, Gurley.
Total, 28.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Allen, Alfred Sidney, mc Alabama 81, cb Tuscaloosa 88, New Market.
Brouillette, Pierre Lawrence, mc Ohio 71, cb 84, Huntsville.
Burnett, William, (Homeopathic) mc univ Vanderbilt 90, cb 97, Huntsville.
Carpenter, James Allen, mc Alabama 96, cb 96, New Hope.
Cochran, Robt. E., (Botanic), mc Memphis 68, cb 78, Wanderer.
Duffield, Alfred Manley, (Homeopathic), mc univ Boston 85, cb Mobile 85, Huntsville.
Farley, Jno. Benton mc univ Vanderbilt 86, cb 86, Farley.
Burwell, Edward D., mc S. of M. Kentucky 78, cb 78, Huntsville.
Flint, James C., mc univ Louisville 78, cb 78, Gurley.

Glover, Anthony Natalie, mc univ Nashville 87, cb 87, Owens Cross Roads.

Hatcher, Archie Wood, mc —, cb 82, West Huntsville.

Hensley, Wm. Thomas, mc univ Nashville 78, cb 78, Triana.

Hertzler, Jno., (Homeopathic), mc univ Nashville 78, cb 82, Triana.

Hinds, Byron William, mc univ Nashville 66, cb 78, New Hope.

Horton, John Jackson, mc univ Vanderbilt 81, cb Jackson 84, New Market.

Johnson, Henry Raymond, mc univ Nashville 87, cb Marshall 87, New Hope.

Lipscomb, Albin Willshire, mc univ Nashville 96, cb 96, New Market.

Scruggs, Burgess E., (col.), mc univ Nashville 70, cb 79, Huntsville.

Shelby, Anthony Bowling, mc univ —, cb 78, Huntsville.

Total, 19.

Moved into the county—William C. Darnell, from —— to Huntsville; Louis Edelman, from Limestone county to Huntsville; F. H. May, from —— to Huntsville.

Moved out of the county—Jno. M. Feeney, from Deposit to parts unknown.

Deaths—James Thomas Johnson, of apoplexy; John Marion Layman, of pneumonia.

MARENGO COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, C. B. Whitfield; Vice-President, J. D. Jones; Secretary, A. P. McArthur; Treasurer, J. B. Whitfield; Health Officer, W. L. Kimbrough. Censors—J. H. George, W. L. Kimbrough, D. C. Moseley, J. R. Goodloe, S. P. Hand.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barron, A. Lee, mc Memphis 98, cb 98, Sweet Water.

Foscue, Francis Lewis, mc Jefferson 84, cb Perry 85, Demopolis.

George, James Hosea, mc South Carolina —, cb 78, Linden.

Goodloe, John Russell, mc univ Vanderbilt 93, cb Sumter 94, Demopolis.

Hand, Samuel Patton, mc univ Louisiana 83, cb Sumter 83, Demopolis.

Jones, James D., mc Alabama 94, cb 94, Sweet Water.

Dryer, Thomas Edmond, mc Alabama 86, cb Macon 86, Huntsville.
Erskine, Albert Russell, mc univ Pennsylvania 51, cb 78, Huntsville.
Edelman, Louis, mc Kiningsburg 85, Curtis Institute 91, cb Limestone 97, Huntsville.
Fletcher, Richard Matthew, Sr., mc univ Pennsylvania 54, cb 78, Madison.
Fletcher, Richard Matthew, Jr., mc univ Alabama 94, cb 94, Madison.
Graham, Benjamin Emmett, mc univ of the South Sewanee 94, cb Jackson 94, Gurley.
Haden, William Wright, mc univ Vanderbilt 90, cb 92, Owens X Roads.
Hampton, J. P., mc —, cb 78, Meridianville.
Haney, Julius Tilman, mc Alabama 91, cb Colbert 92, Madison.
Heffelfinger, Marion Lorain, mc S of M Kentucky 94, cb 95, Huntsville.
Lowry, Saml. Hickman, mc Bellevue 73, cb 78, Huntville.
McKelvy, Wm. G., mc —, cb 88, Dallas Mills.
McDonell, Henry, mc univ Louisiana 68, cb 78, Huntsville.
May, F. H., mc univ South 99, cb Marion 99, Huntsville.
Patton, Irvine W., mc univ Virginia 95, cb 95, Huntsville.
Pettus, Wm. David, mc univ Vanderbilt 68, cb 78, Rep.
Pettus, Claude, mc univ Vanderbilt 96, cb Limestone 96, Rep.
Pride, William T., mc univ Tulane 95, cb 95, Madison.
Westmoreland, Hawkins D., mc univ Vanderbilt 92, cb Limestone 93, Huntsville.
Wheeler, Wm. Camp, mc univ Bellevue 62, cb Colbert 81, Huntsville.
Williamson, Edwin Oliver, mc Chattanooga 98, cb 98, Gurley.
Total, 28.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Allen, Alfred Sidney, mc Alabama 81, cb Tuscaloosa 88, New Market.
Brouillette, Pierre Lawrence, mc Ohio 71, cb 84, Huntsville.
Burnett, William, (Homeopathic) mc univ Vanderbilt 90, cb 97, Huntsville.
Carpenter, James Allen, mc Alabama 96, cb 96, New Hope.
Cochran, Robt. E., (Botanic), mc Memphis 68, cb 78, Wanderer.
Duffield, Alfred Manley, (Homeopathic), mc univ Boston 85, cb Mobile 85, Huntsville.
Farley, Jno. Benton mc univ Vanderbilt 86, cb 86, Farley.
Burwell, Edward D., mc S. of M. Kentucky 78, cb 78, Huntsville.
Flint, James C., mc univ Louisville 78, cb 78, Gurley.

Glover, Anthony Natalie, mc univ Nashville 87, cb 87, Owens Cross Roads.

Hatcher, Archie Wood, mc —, cb 82, West Huntsville.

Hensley, Wm. Thomas, mc univ Nashville 78, cb 78, Triana.

Hertzler, Jno., (Homeopathic), mc univ Nashville 78, cb 82, Triana.

Hinds, Byron William, mc univ Nashville 66, cb 78, New Hope.

Horton, John Jackson, mc univ Vanderbilt 81, cb Jackson 84, New Market.

Johnson, Henry Raymond, mc univ Nashville 87, cb Marshall 87, New Hope.

Lipscomb, Albin Willshire, mc univ Nashville 96, cb 96, New Market.

Scruggs, Burgess E., (col.), mc univ Nashville 70, cb 79, Huntsville.

Shelby, Anthony Bowling, mc univ —, cb 78, Huntsville.

Total, 19.

Moved into the county—William C. Darnell, from —— to Huntsville; Louis Edelman, from Limestone county to Huntsville; F. H. May, from —— to Huntsville.

Moved out of the county—Jno. M. Feeney, from Deposit to parts unknown.

Deaths—James Thomas Johnson, of apoplexy; John Marion Layman, of pneumonia.

MARENGO COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, C. B. Whitfield; Vice-President, J. D. Jones; Secretary, A. P. McArthur; Treasurer, J. B. Whitfield; Health Officer, W. L. Kimbrough. Censors—J. H. George, W. L. Kimbrough, D. C. Moseley, J. R. Goodloe, S. P. Hand.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barron, A. Lee, mc Memphis 98, cb 98, Sweet Water.

Foscue, Francis Lewis, mc Jefferson 84, cb Perry 85, Demopolis.

George, James Hosea, mc South Carolina —, cb 78, Linden.

Goodloe, John Russell, mc univ Vanderbilt 93, cb Sumter 94, Demopolis.

Hand, Samuel Patton, mc univ Louisiana 83, cb Sumter 83, Demopolis.

Jones, James D., mc Alabama 94, cb 94, Sweet Water.

Kimbrough, William Leonard, mc univ Louisiana 83, cb 93, Linden.
Lockhart, William Crocheron, mc Alabama 89, cb 89, Dayton.
McArthur, Andrew Patterson, mc Alabama 85, cb Mobile 85, Rembert.
McCants, Robert Bell, mc Georgia Southern 82, cb 82, Demopolis.
Moseley, Daniel Coleman, mc Alabama 88, cb —, Faunsdale.
Smith, Seth David, mc univ Louisiana 54, cb 78, Demopolis.
Strudwick, Edmond, mc Jefferson 57, cb 78, Dayton.
Thomas, Charles Brooks, mc Atlanta Southern 83, cb 83, Thomaston.
Whitfield, Bryan Watkins, mc univ Pennsylvania 53, cb 79, Demopolis.
Whitfield, Charles Boaz mc phys and surg New York 71, cb 78, Demopolis.
Whitfield, James Bryan, mc univ Pennsylvania 67, cb 82, Jefferson.
Whitfield, George, mc univ Pennsylvania 58, cb 78, Old Spring Hill.
Wilson, Isham Griffin, mc univ Louisiana 58, cb Dallas 78, Demopolis.
Total, 19.

Honorary Members.

Evans, Josiah Thomas, mc Jefferson 67, cb 78, Myrtlewood.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Cole, William W., mc Pennsylvania 50, cb —, Jefferson.
Gillespie, Robert Clanton, mc univ Louisville 83, cb 83, Putnam.
Jones, Green Irwin, mc univ —, cb —, Jefferson.
McCorkle, Thomas James, mc Alabama 83, cb 83, Siddonsville.
Nichols, J. E., mc Alabama 91, cb —, Nicholsville.
Pegram, William Edward, old law 44, cb 79, Dayton.
Poellnitz, Benjamin Bruno, mc univ Louisiana 47, cb 86, Rembert.
Ruffin, James Sterling, mc univ Pennsylvania 49, cb 78, Demopolis.
Slade, Henry, mc Alabama 72, cb 87, Magnolia.
Stone, Augustus B., mc Alabama 86, cb Baldwin 86, Linden.
Skinner, John S., mc Alabama 97, cb 98, Shiloh.
Stone, Sardine Graham, mc Alabama 87, cb Calhoun 87, Nanafalia.
Tucker, William Sidney, mc S. of M. Kentucky 90, cb 93, Luther's Store.
Wood, John Hackworth, mc Alabama 86, cb 86, Dixon's Mills.
Total, 14.

Moved into the county—Green I. Jones, from Clark county to Jefferson.

Deaths—Thomas Jefferson Bettis, mc Louisville 61, cb 84, July 20, 1899, of typhoid fever; William Fletcher Drummond, mc Maryland 47, died March, 1900; James Armistead Abrahams, mc Alabama 92, cb 92, March, 1900, of phthisis pulmonalis.

MARION COUNTY MEDICAL SOCIETY—Montgomery, 1888.

OFFICERS.

President, A. L. Moorman; Vice-President, J. R. Burleson; Secretary, C. L. Woods; Treasurer, M. C. Martin; Health Officer, Warren Guyton. Censors—J. R. Burleson, M. C. Martin, C. L. Woods, K. B. Goggans, W. Guyton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Burleson, J. Rufus, mc Memphis 97, cb 97, Hamilton.
Goggans, Kimbro B., mc Memphis 93, cb 93, Hackleburg.
Guyton, Warren, mc Louisville 88, cb 98, Knowle.
Martin, Middleton C., ng, cb 88, Hamilton.
McCarey, W. J., mc Memphis 93, cb 93, Guin.
Moorman, Achiles Lucius, ng, cb 88, Bexar.
Woods, C. L., mc Memphis 98, cb Lamar 98, Hamilton.
Total, 7.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Clark, William Felin, ng, cb 88, Hamilton.
Cochran, William Jefferson, ng, cb 88, Goldmine.
Ernest, James Franklin, ng, cb 88, Winfield.
Holliday, Walter Scott, ng, cb 88, Bexar.
Johnson, John Carroll, mc Louisville 92, cb Fayette 92, Glen Allen.
Morton, T. E., mc Chattanooga —, cb —, Winfield.
Palmer, B. F., mc —, cb —, ———.
Palmer, R. P., mc —, cb —, ———.
Roden, V. G., mc —, cb —, ———.
Williams, E. L., mc —, cb —, ———.
Total, 10.

MARSHALL COUNTY MEDICAL SOCIETY—Anniston, 1886.

OFFICERS.

President, T. A. Casey; Vice-President, S. M. Elrod; Secretary, M. P. Stephens; Treasurer, M. P. Stephens; Health Officer, S. M. Elrod. Censors—T. A. Casey, W. P. Hall, M. F. Patterson, P. B. Lusk, D. A. Morton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Casey, Thaddeus Alonzo, mc univ Vanderbilt 91, cb 91, Albertville.
Davis, Samuel J., mc Atlanta 82, cb Randolph 82, Albertville.
Elrod, Samuel M., mc univ Vanderbilt 94, cb DeKalb 94, Albertville.
Hall, William Presley, mc Atlanta 86, cb86, Albertville.
Jones, Thomas A.,mc Birmingham 97, cb Chilton 97, Hyatt.
Lusk, Phocian B., mc Bellevue 91, cb 91, Guntersville.
Morton, David A., mc univ Grant 96, cb 96, Boaz.
Noel, William Lewis, ng, cb 86, Boaz.
Patterson, Millard Filmore, mc univ Vanderbilt 93, cb 93, Mid.
Stephens, Miles Pinckney, mc univ Grant 94, cb Blount 94, Readbrook.
Total, 10.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Baker, P. M., mc Atlanta Southern 92, cb 94, Boaz.
Dodd, J. T., illegal, Boaz.
Dowdy ———, ng —— illegal, Martling.
Hines, M. L., mc univ Vanderbilt 91, cb 91, Arab.
Jackson, J. M., mc —— —, cb —, Guntersville.
Jordan, D. C., mc Memphis 92, cb 92, Guntersville.
Lowery, John, ng, cb 86, McLarty.
McGahey, Joseph Jefferson, ng, cb 86, Columbus City.
Noel, W. E., mc univ Grant 99, illegal, Boaz.
Patterson, J. J., mc ———, cb —, Marshall.
Scarbrough, William M., ng, cb 87, Albertville.
Segers, G. W., illegal, McVille.
Total, 12.

Moved into the county—P. M. Baker, from Snead, Blount county, to Boaz.

Moved out of the county—J. F. Emmerson, from Martling to Rock Run, Ala.; John R. Shennon, from Marshall to Lathomville.

MOBILE COUNTY MEDICAL SOCIETY—Mobile, 1876.

OFFICERS.

President, W. B. Pape; Vice-President, C. N. Owen; Secretary, G. H. Fonde; Treasurer, J. G. Thomas; Health Officer, P. J. M. Acker. Censors—G. A. Ketchum, G. Owen, J. G. Thomas, C. A. Mohr, V. P. Gaines.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Acker, Paul Jerome Morris, mc Alabama 92, cb 92, Mobile.
Bondurant, Eugene DuBose, mc univ Virginia 83, cb Hale 83, Mobile.
Crampton, Orson Lucius, mc Bellevue 65, cb 88, Mobile.
England, John Tillman, mc Alabama 99, cb 99, Mobile.
Fonde, George Heustis, mc Alabama 97, cb 97, Mobile.
Fonde, Keith, mc Alabama 94, cb 94, Citronelle.
Frazer, Tucker Henderson, mc Alabama 88, cb Lee 88, Mobile.
Gaines, Vivian Pendleton, mc Alabama 72, phys and surg New York 73, cb Choctaw 79, Mobile.
Goldthwaite, Henry, mc Alabama 96, cb 96, Mobile.
Goode, Rhett, mc Alabama 71, cb 78, Mobile.
Goodman, Duke Williams, mc univ Louisiana 91, cb 92, Mobile.
Henderson, William Thomas, mc Detroit 96, cb 97, Mobile.
Hendon, James Jefferson, mc Alabama 86, cb 86, Mobile.
Hirshfield, Henry Phillips, univ Pennsylvania 78, cb 78, Mobile.
Inge, Henry Tutwiler, mc univ New York 83, cb 83, Mobile.
Inge, James Tunstall, mc univ New York 94, cb 94, Mobile.
Inge, Richard, mc univ New York 71, univ Virginia 79, cb Hale 78, Mobile.
Jackson, William Richard, mc Alabama 88, cb 88, Mobile.
Ketchum, George Augustus, univ Pennsylvania 46, cb 78, Mobile.
Marechal, Edwin Lesley, mc Alabama 70, cb Baldwin 86, Mobile.
McIntosh, William Pade, U. S. M. H. S., Mobile.
Mohr, Charles A., mc Alabama 84, cb 92, Mobile.
Mohr, Herman Brent, mc Alabama 91, cb 92, Mobile.
Owen, Calvin Norris, mc Alabama 88, cb 88, Mobile.
Owen, Goronway, mc univ Pennsylvania 57, cb 78, Mobile.
Pape, William Barnemore, mc Alabama 82, cb 82, Mobile.
Porter, Ira Webster, mc Alabama 92, cb 92, Mobile.
Pugh, Sidney Stewart, mc univ Louisiana 89, cb Clark 89, Mobile.
Sanders, William Henry, mc Jefferson 62, cb 78, Mobile.
Scales, Thomas Sidney, mc phy and surg New York 67, cb 78, Mobile.
Scales, Willis West, mc Alabama 96, cb 96, Mobile.
Sledge, William Henry, mc Alabama 80, cb Sumter 80, Mobile.
Tam, Silas Springer, mc Alabama 94, cb 94, Mobile.
Terrill, Joshua D., mc Ohio 85, cb 92, Mobile.
Thomas, James Grey, mc univ Pennsylvania 56, cb 78, Mobile.
Wright, Ruffin Ashe, mc univ Virginia 90, cb Sumter 90, Mobile.
Total, 36.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Blewitt, Means, mc —, cb —, Citronelle.
Clarke, W. H., mc Alabama 94, cb —, Mobile.
Campbell, Douglas G., mc Alabama 96, cb 96, Mobile.
Dickson, T. Aubrey, mc univ Tulane 92, cb Montgomery 92, Mobile.
Edmunds, Samuel C., mc univ Louisville 56, cb Mobile 92, Spring Hill.
Edwards, William, mc Alabama 80, cb 80, Bayou La Batre.
Gaines Marion Toulmin, mc Alabama 90, cb 92, Toulminville.
Glass, Parker Josiah, mc Alabama 84, cb 85, Mobile.
Hall, Alexander P., mc univ Louisiana 59, cb 78, Mobile.
Harris, Oliver H., mc Alabama 95, cb 96, Mobile.
Hawley, John B., mc —, cb —, Mobile.
Howard, Percy John, mc Alabama 96, cb 96, Mobile.
Johnston, David Elijah, mc Georgia 68, cb 78, Mobile.
Lyon, George G., mc Pulte (Homeopathic) 88, cb —, Mobile.
Malay, Ranney Phelps, mc Alabama 84, cb Elmore 84, Whistler.
Mastin, Claudius Henry, Jr., mc univ Pennsylvania 84, cb 84, Mobile.
Mastin, William McDowell, univ Pennsylvania 74, cb 78, Mobile.
McCarty, Miles Edward, mc Alabama 78, cb 78, Mobile.
Michael, Jacob G., mc univ Virginia 60, cb 78, Citronelle.
Myers, Augustus P., mc St. Louis (Homeopathic) 88, cb —, Mobile.
Roemer, Francis John Baptiste, mc univ Louisiana 36, cb 78, Spring Hill.
Roe, Charles K., mc ——, cb —, Spring Hill.
Sawyer, Julian E., mc univ Louisville 96, cb Geneva 96, Mobile.
Sherard, Frank Ross, mc univ Pennsylvania 94, cb 94, Mobile.
Harris, I. N., (col), mc Meharry, state board 99, Mobile.
Ward, Alfred G., Jr., mc Alabama 94, cb 94, Mobile.
Ward, William G., Jr., mc Alabama 95, cb 95, Mobile.
Woodcock, Burgett, mc Alabama 96, cb 97, Mobile.
Total, 28.

Moved into the county—I. N. Harris, (col), from Montgomery to Mobile; W. P. McIntosh, U. S. Marine Hospital Service, to Mobile.

Moved out of the county—Oscar Dowling, from Mobile to parts unknown.

Examinations—John Tillman England, mc Alabama 99, certificated granted; Ernest Falanga, mc univ of Naples 91, certificate granted.

Deaths—William J. Lea; Allen L. Strong (colored).

MONROE COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, F. S. Daily; Vice-President, J. W. Rutherford; Secretary, J. M. Wiggins; Treasurer, J. M. Wiggins; Health Officer, J. M. Wiggins. Censors—F. S. Daily, W. M. Hestle, W. A. Stallworth, F. H. Mason.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bizzelle, Clarence Eugene, mc univ Vanderbilt 93, cb 93, Monroeville,
Busey, John, mc Alabama 94, cb 94, Jones' Mill.
Burroughs, William Monroe, mc South Carolina 59, cb 77, Pineville.
Chapman, William Rufus, mc Georgia Reform 79, cb 79, Simpkinsville.
Cole, D. D. mc Alabama 98, cb 98, Mt. Pleasant.
Daily, Fielding Straughn, mc Alabama 71, cb 77 Kempville.
Hestle ,William Monroe, mc Alabama 85, cb 85, Beuna Vista.
Mason, Francis Henry, mc Alabama 91, cb 91, Tinela.
Mason, William Joseph, mc Atlanta 84, cb Wilcox 84, Activity.
Rutherford, James Wallace, mc Alabama 93, cb 93, Franklin.
Scott, Gladin Gorin, mc univ Louisville 85, cb 85, Mt. Pleasant.
Stallworth, William Allen, mc Alabama 93, cb 93, Pineville.
Wiggins, James Monroe, mc Alabama 78, cb 78, Monroeville.
Total 13.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Draughn, Robert I., mc —— —, cb —, Perdue Hill.
Gailiard, George Walter, mc univ Louisville 82, cb 83, Perdue Hill.
Russell, James Thomas, mc Georgia Reform 55, cb 77, Monroeville.
Total, 3.

Moved into the county—James Thomas Russell, from Evergreen to Monroeville.

Moved out of the county—William Franklin Betts, from Burntcorn to Evergreen, Conecuh county; F. H. Norris, from Mt. Pleasant to East Alabama; William Henry Abernathy, from Tinela to Flomaton, Escambia county.

Examinations—Walter Scott Sowell, certificate granted.

MONTGOMERY COUNTY MEDICAL SOCIETY—Eufaula, 1878.

OFFICERS.

President, J. L. Gaston; Vice-President, S. A. Billing; Secretary, C. T. Pollard; Treasurer, Max Sturm; Health Officer, Shirley Bragg. Censors—Glenn Andrews, B. R. Pearson, M. L. Wood, J. L. Gaston, W. G. Bibb.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Anderson, John Mordecia, mc univ City New York 91, cb 91, Montgomery.

Andrews, Glenn, mc univ City New York 86, cb 86, Montgomery.

Baldwin, Benjamin James, mc Bellevue 77, cb 83, Montgomery.

Battle, Joseph Thomas, mc Georgia 67, cb Barbour 87, Highland Park.

Billing, Samuel Aydelotte, mc Bellevue 97, cb 97, Montgomery.

Bibb, William George, mc univ Vanderbilt 78, cb 78, Montgomery.

Bragg, Shirley, mc Alabama 75, cb Lowndes 79, Montgomery.

Chapman, Benjamin Sidney, mc univ City New York 92, cb 92, Montgomery.

Dennis, George A., mc Atlanta Southern 93, cb Autauga 93, Montgomery.

Gaston, John Brown, mc univ Pennsylvania 55, cb 78 Montgomery.

Gaston, Joseph Lucius, mc Phys. & Surgs. New York 85, cb 88, Montgomery.

Goldthwaite, Robert, mc Bellevue 93, cb 94, Montgomery.

Henry, John Hazzard, mc Philadelphia 51, cb Dallas 79, Montgomery,

Hill, Luther Leonidas, mc univ City New York 81, cb Jefferson 81, Montgomery.

Hill, Robert Sommerville, mc univ City New York 91, cb 91, Montgomery.

Hill, Robert McCullough, mc univ City New York 60, cb 78, Mt. Meigs.

Hogan, Samuel Mardis, mc univ Louisville 73, cb Bullock 80, Montgomery.

Jackson, Walter Clark, mc univ Pennsylvania 52, cb 78, Montgomery.

Johnson, Oscar, mc Alabama 96, cb Pike 96, Downing.

Kirkpatrick, Milton Barnes, mc univ Tulane 96, cb Crenshaw 96, Montgomery.

Law, William Lamar, mc univ Tulane 94, cb Dallas 95, Montgomery.

Mason, Joseph Crump, mc Bellevue 81, cb 81, Snowdoun.
McConnico, Frank H., mc univ Tulane 99, cb Wilcox 99, Montgomery.
McCrummin, Norman Henry, mc univ Vanderbilt 84, cb 85, Ramer.
Michel, Richard Frazer, mc South Carolina 47, cb 78, Montgomery.
Montgomery, Arthur Hugh, mc Atlanta 98, cb 98, Montgomery.
Naftel, Jesse Holmes, mc Alabama 87, cb 87, Montgomery.
Naftel, St. John, mc univ Vanderbilt 79, cb 80, Montgomery.
Owen, Pascal Harrison, mc univ City New York 59, cb Lowndes 78, Montgomery.
Pearson, Benjamin Rush, mc Alabama 81, cb 81, Montgomery.
Persons, Henry Stanford, mc univ Virginia 93, cb Lee 94, Montgomery.
Pitts, Robert Newton, mc Atlanta 90, cb Russell 90, Montgomery.
Pollard, Charles Teed, mc univ Tulane 97, cb 97, Montgomery.
Powell, Claudius William, mc Alabama 88, cb 88, Fleta.
Robinson, Louis Dominick, mc univ Tulane 96, cb 96, Montgomery.
Rushing, Thomas Elbert, mc Alabama 90, cb 91, Pike Road.
Sadler, John Milton, mc univ Louisiana 73, cb Perry 78, Montgomery.
Sadler, Wilbur Fisk, mc phy and surg Baltimore 91, cb Autauga 91, Montgomery.
Steiner, Samuel Jackson, mc univ Vanderbilt 79, cb Butler 79, Montgomery.
Stevenson, Forney Caldwell, mc phy and surg New York 93, cb Calhoun 93, Montgomery.
Stough, Thos. Jefferson, mc univ Tennessee 93, cb Crenshaw 93, Chisholm.
Sturm, Max, mc Ohio 89, cb Autauga 95, Montgomery.
Thigpen, Charles Alston, mc univ Tulane 88, cb Butler 88, Montgomery.
Thorington, Thomas Chilton, mc univ Tulane 94, cb 94, Montgomery.
Townsend, A. F., mc —, cb —, Pine Level.
Townsend, James B., mc —, cb —, Pine Level.
Waller, George Platt, mc univ City New York 92, cb 92, Montgomery.
Watkins, Isaac LaFayette, mc Bellevue 78, cb Bullock 86, Montgomery.
Weeden, Hamilton, mc Alabama —, cb Barbour —, Mongomery.
Wilkerson, Wooten Moore, mc univ City New York 80, cb Perry 80, Montgomery.
Wilkerson, Charles Walter, mc univ Tulane 98, cb Perry 98, Montgomery.
Wilkinson, James Anthony, mc univ Louisville 69, cb Escambia 86, Montgomery.

Wood, Milton LeGrand, mc Bellevue 77, cb 84, Montgomery.
Yarbrough, Frank Reid, mc univ Vanderbilt 98, cb Crenshaw 98, Montgomery.
Total, 54.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Baker, J. N., mc univ Virginia 98, cb —, Montgomery.
Battle, H. E., mc univ Tennessee 96, state board 97, Pine Level.
Brown, James Mack, mc Alabama 89, cb 89, Sellers.
Buchanan, J. P., mc Alabama 90, cb Butler 90, Montgomery.
Calloway, James Wesley, mc univ Vanderbilt 81, cb 82, Snowdoun.
Centerfit, Samuel Earle, mc univ City of New York 98, state board 99, Montgomery.
Cutts, William Parsons, ng, (old law), cb 78, Chambers.
Davis, Leroy W., mc Georgia 57, cb 78, Morganville.
Duncan, Thomas, mc Alabama 92, cb 92, Mt. Carmel.
Dungee, Alfred Coleman (col.), mc Howard 89, state board 91, Montgomery.
Grimes, Erasmus Darwin, mc univ Louisville 66, cb 77, Montgomery.
Harris, Andrew Jackson, mc —, cb 85, Lapine.
Jackson, Edward Beatty, mc Alabama 85, cb 85, Ramer.
Kendrick, William Toulmin, mc Atlanta 76, cb Butler 78, Montgomery.
Kirk, Eben Bell, mc Alabama 85, cb 85, Montgomery.
McDade, James, mc Georgia 72, cb 78, Waugh.
McLean, James, mc univ Louisville 66, cb 78, Hope Hull.
Means, Thomas Alexander, mc Atlanta 57, cb 78, Montgomery.
Merriwether, James L., mc —, cb —, Mathews.
Nicholson, John Cogburn, mc Jefferson 55, cb 79, Mt. Meigs.
Patterson, Daniel S., mc —, cb —, Montgomery.
Sankey, George L., mc univ Louisville 77, cb 78, Tharin.
Sankey, John Thomas, mc —, (retired) cb 78, Tharin.
Scott, David H. C. (col.), mc Nashville 95, cb Jefferson 95, Montgomery.
Stone, Henry Llewellen, mc univ Maryland 68 (retired), Montgomery.
Total, 25.

Moved into the county—J. N. Baker, from Waycross, Ga., to Montgomery; Joseph T. Battle, from Barbour county to Highland Park; George A. Dennis, from Autauga county to Montgomery; Frank H. McConnico, from Wilcox county to Montgomery.

Moved out of the county—Francis M. Thigpen, from Montgomery to Pennsacola; Jas. R. Haigler, from Montgomery to Elmore; Thomas J. Dean, from Matthews to Union Springs.

*MORGAN COUNTY MEDICAL SOCIETY—Mobile, 1876.

OFFICERS.

President, F. B. Hunter; Vice-President, W. C. Buckley; Secretary, E. J. Conyngton; Treasurer, E. J. Conyngton; Health Officer, S. L. Rountree. Censors—M. W. Murray, W. C. Buckley, W. L. Dinsmore, S. L. Rountree, W. A. Barclift.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barclift, Willis Anderson, mc univ Tennessee 78, cb 79, Hartselle.

Buckley, Walter Colquit, mc phy and surg New York 85, cb 87, Decatur.

Conyngton, Enoch James, mc St. Louis 83, cb 87, Decatur.

Cook, W. H., mc —, cb —, Falkville.

Dinsmore, William Lewis, mc univ Vanderbilt 81, cb Lawrence 82, Decatur.

Hunter, Felix Bryan, mc univ Vanderbilt 81, cb Lawrence 86, Falkville.

Martin, ——— ———, mc —, cb —, Basham's Gap.

Murray, Michael William, mc univ McGill, Montreal, Canada 90, cb 90, New Decatur.

Rountree, Scott Louis, mc Jefferson 58, cb 78, Hartselle.

Shelton, John Benjamin, mc St. Louis 92, cb Jackson 96, New Decatur.

Sherrill, Richard Byrd, mc Alabama 87, cb 94, Hartselle.

Winston, David Macon, mc Alabama 86, cb 86, Summerville.

Total, 12.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Binford, Peter, mc New Orleans 61, cb Morgan 79, Summerville.

Gaston, Paul Cheeves, mc univ Vanderbilt 78, cb Limestone 78, New Decatur.

Gill, Jordan Lawrence, mc univ Louisville (one course) 69, cb 78, Summerville.

Gillespie, James Clark, mc univ Vanderbilt 81, cb Madison 81, New Decatur.

Hodgeboom, Charles Ellis, md —, cb 90, Talucah.

Hodges, John Pruitt, mc univ Vanderbilt 78, cb Lawrence 78, Danville.

Kitchens, John Mowbray, mc Alabama 85, cb Lawrence 85, Hartselle.

Oden, Alexander Hamilton, ng, cb Cullman 78, Lawrence Cove.

Peck, Cicero Fain, mc univ Tennessee 90, cb 90, Summerville.

Ryan, Thomas LaFayette, mc univ Nashville 58, cb 87, Hartselle.

Smith, John Stanhope, mc univ Louisville 47, cb 78, Woodland Mills.

Steers, Willis Wood, (col.) mc univ Michigan 88, cb Montgomery 88, Decatur.

Stephenson, Edison David, mc univ Nashville 68, cb 78, Danville.

Stephenson, Richard Lewis, ng, cb 78, New Dacatur.

Stringer, William Morton, mc univ Tennessee 93, cb 99, Falkville.

Thomason, William Black, mc Memphis —, cb 86, Hartselle.

Turney, Joseph Simpson, mc univ Vanderbilt 82, cb 82, Hartselle.

Wilhite, Simeon Madison, mc Memphis 91, cb 91, Cedar Plains.

Wilson, Able Robert, mc Alabama (one course), cb Lawrence 85, Hartselle.

Total, 19.

*Note.—As no report has been received from Morgan county this year, the report for 1899 is here reproduced.

PERRY COUNTY MEDICAL SOCIETY—Montgomery, 1875.

OFFICERS.

President, O. L. Shivers; Vice-President, J. B. Hatchett; Secretary, J. B. Hatchett; Treasurer, E. B. Thompson; Health Officer, J. B. Hatchett. Censors—O. L. Shivers, E. B. Thompson, G. R. Johnson, J. B. Hackett.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barron, William Rowan, mc univ Virginia 61, cb 78, Scotts.

Hatchett, James Benton, mc univ Vanderbilt 90, cb Limestone 90, Marion.

Johnson, Gaius Rowan, mc S of M Kentucky 92, cb 92, Marion

Shivers, Offa Lunsford, mc univ Louisiana 73, cb Hale 78, Marion.

Swann, Edward, mc S of M Kentucky 95, cb 95, Spratts.

Thompson, Elias Benson, mc univ Louisiana 69, cb 78, Marion.

Whitfield, Sidney Thomas, mc univ Tulane 94, cb 94, Uniontown.

Wilkerson, Charles A., mc univ New York 75, cb 78, Marion.

Total, 8.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Collier, Armstead Mayfield, ng, cb 78, Chadwick.
Tucker, James Buchanan, mc univ Vanderbilt 78, cb 79, Jericho.
Pou, James Rufus, mc univ South Carolina 55, cb 78, Uniontown.
Payson, Thomas H., mc —, cb Shelby —, Perryville.
Total 4.

Moved into the county—C. Byran Robinson, from Lowndes county to Scotts; James Neil McLean, from Lowndes county to Uniontown.

Moved out of the county—William F. Henderson, from Marion to Jefferson county; William Cyprian Cross, from Uniontown to Cincinnati, Ohio; Louis De Yampert Webb, from Scotts to Lowndesboro.

*PICKENS COUNTY MEDICAL SOCIETY—Eufaula, 1878.

OFFICERS.

President, G. B. Wimberly; Vice-President, S. H. Hill; Secretary, H. B. Upchurch; Treasurer, H. B. Upchurch; Health Officer, H. B. Upchurch. Censors—S. H. Hill, G. B. Wimberly, N. Hill, J. Moody, H. B. Upchurch.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Agnew, James Alexander, mc Alabama 74, cb 78, Neal's Mill.
Barnett, James Francis, mc Alabama 92, cb 92, Temple.
Clear, Christopher Columbus, mc Alabama 85, cb 85, Byars.
Cook, Thomas Hugh G., mc Alabama 86, cb 86, Stone.
Hill, Newton, mc Alabama 76, cb 85, Pickensville.
Hill, Samuel Henry, mc univ Louisville 70, cb 78, Carrollton.
Jones, Thomas Bolivar, mc Bellevue 86, cb 86, Stone.
Kirk, Arthur Albertus, mc Alabama 97, cb 97, Temple.
Long, James Barclay, mc Louisville 93, cb 95, Pickensville.
McKinstry, Thomas Harlan, mc Alabama 83, cb 93, Carrollton.
Moody, Joseph, mc univ Louisville 71, cb 78, Franconia.
Moorhead, Henry Clay, univ Nashville 69, cb 78, Reform.
Murphy, Thomas Elmore, mc Alabama 92, cb 92, Bethany.
Snoddy, Ephraim A., mc Alabama 97, cb 97, Garden.
Sterling, Samuel Johnston, mc Alabama 61, cb 78, Olney.
Upchurch, Harvey Benton, mc Alabama 92, cb 92, Carrollton.
Williams, Henry Lawrence, mc Jefferson 53, cb 78, Dunbar, Miss.

Wimberly, Gilbert Bush, mc Alabama 92, cb 92, Reform.
Wyatt, Rufus Riley, mc univ Nashville 84, cb 89, Memphis.
Total, 19.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Baird, Duke Orleans, ng, cb 78, Reform.
Brandon, Richard Clifton, mc Alabama —, cb 88, Gordo.
Collins, ———, mc —, cb —, Palmetto.
Davis, John Longmire, mc univ Vanderbilt 88, cb 88, Gordo.
Deal, Seaborn Edgar, mc Alabama 94, cb Tuscaloosa 94, Pleasant Grove.
Duncan, John Francis, mc Alabama 74, cb 78, Beard's.
Hancock, Jesse, mc Alabama 78, cb 78, Stafford.
Rickman, John Westley, ng, cb 78, Stafford.
Total, 8.

*NOTE.—As no report has been received from Pickens county this year the report for 1899 is here reproduced.

*PIKE COUNTY MEDICAL SOCIETY—Eufaula, 1878.

OFFICERS.

President, J. S. Beard; Vice-President, C. W. Hilliard; Secretary, C. W. Hilliard, Jr.; Treasurer, C. W. Hilliard, Jr.; Health Officer, C. W. Hilliard. Censors—P. H. Brown, J. A. McEachern, W. B. Sanders, J. W., Robertson, P. U. Brown.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Beard, Josephus Simmons, mc univ New York 79, cb 79, Troy.
Brown, Pugh H., mc univ New York 54, cb 78, Troy.
Brown, Pugh U., mc univ Tulane 95, cb 95, Troy.
Eiland, William A., mc Atlanta 81, cb 84, Henderson.
Hilliard, Charles W. Sr., Georgia Reform 61 cb 78, Troy.
Hilliard, Charles W., Jr., mc Alabama 95, cb 95, Troy.
McEachern, C. P., Alabama 96, cb 96, Banks.
McEachern, John Adolphus, mc univ Louisville 89, cb 89, Brundidge.
Mullins, James Thomas, mc Augusta 72, cb Montgomery 82, Troy.
Robertson, James W., mc Alabama 93, cb 93, Tarentum.
Sanders, William B., mc Atlanta Southern 85, cb 85, Troy.
Sanders, William Shelby, mc univ Vanderbilt 92, cb 92, Milo.
Watkins, James M., mc univ Vanderbilt 94, cb 94, Tarantum.
Watkins, James M., mc univ Vanderbilt 94, cb 94, Tarentum.

Williamson, George W., mc 93, cb Crenshaw 93, Goshen.
Total, 15.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Albritton, George Allen, mc univ Louisville 72, cb Crenshaw 82, Henderson.
Beasley, James M., mc Alabama 96, cb 96, China Grove.
Bean, James Madison, mc Bellevue 79, cb Bullock 82, Buck Horn.
Boyd, Leroy R., mc Alabama 87, cb —, Troy.
Broach, Francis Marvin, mc Atlanta 90, cb 90, Ansley.
Crossley, William Andrew, mc South Carolina 54, cb 78, Banks.
Dewberry, John Hunter, mc Jefferson 54, cb 78, Brundidge.
Dennis, S. H., mc univ Graffenberg 58, cb 78, Olustee Creek.
Dismuke, Benjamin James, mc Georgia 57, cb 84, China Grove.
Ford, Elchana Gardner, ng, old law 56, cb 78, Troy.
Foreman, Howell, mc Jefferson 58, cb 78, Brundidge.
Hamil, Irby Watson, mc univ Louisville 76, cb 78, Goshen Hill.
Johnson, Edward Harris, mc univ Washington, Md., 69, cb Crenshaw 82, Troy.
Pennington, James Cincinnatus, mc univ Tennessee 94, cb 94. Orion.
Salter, C. P., mc —, cb —, Josie.
Townsend, Austin C., mc Augusta, Ga., 61, cb 78, China Grove.
Treadwell. L, M., irregular, Troy.
Wagner, John Troup, ng, cb Montgomery 78, Shady Grove.
Total, 18.

Moved out of the county—Thomas Franklin Moore, from Linwood to Stewarts, Hale county.

NOTE.—As no report has been received from Pike county this year the report for 1899 is here reproduced.

RANDOLPH COUNTY MEDICAL SOCIETY—Eufaula, 1878.

OFFICERS.

President, J. W. Hooper; Vice-President, J. W. Wood; Secretary, P. G. Trent, Sr.; Treasurer, P. G. Trent, Sr.; Health Officer, C. B. Wright. Censors—W. G. Floyd, C. Thompson, J. C. Swann, J. W. Hooper, P. E. Dean.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bonner, William Wallace, mc Atlanta Southern 92, cb 94, Rock Mills.
Dean, Pierce Elliott, mc Alabama 92, cb 93, Wedowee.

Disharoon, Henry Beauregard, mc phy and surg Baltimore 85, cb 85, Roanoke.
Duke, Jefferson Davis, mc Atlanta Southern 84, cb 88, Graham.
Floyd, William Gibson, mc univ Maryland 88, cb 92, Roanoke.
Hood, Joseph Robertson, mc Oglethorpe 57, cb 85, Wedowee.
Hooper, John Wilson, mc Jefferson 84, cb Tallapoosa 84, Roanoke.
Jordan, Charles Alexander, mc Atlanta Southern 84, cb 87, Swann.
Liles, Madison DeKalb, ng, cb 79, Dingler.
McLendon, William Head, mc Alabama 96, cb 96, Rock Mills.
McManus, Michael M., cb 79, Lamar.
Pool, Wyatt Heflin, mc Georgia 67, cb 79, Roanoke.
Swann, Joseph Charles, mc Atlanta 90, cb 90, Wedowee.
Traylor, George Washhington, mc Georgia 91, cb 94, Lamar.
Trent, Powhattan Glover, mc Atlanta 88, cb 88, Roanoke.
Trent, Powhattan Green, mc Jefferson 67, cb 85, Roanoke.
Thompson, Charleton, mc phy and surg Atlanta 99, cb 99, Roanoke.
Welch, James Madison, mc Atlanta Southern 92, cb 93, Truett.
White, Luther Leonidas, ng, cb 79, White.
Wood, James William, mc Atlanta Southern 97, cb Clay 97, Almond.
Wright, Columbus B., mc Atlanta 98, cb 98, Wedowee.
Total, 21.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Dowdy, R. M., mc univ Vanderbilt —, cb —, Hightower.
Gauntt, Elbert Tillman, mc Atlanta 76, cb 84, Ophelia.
Heflin, Wilson Lumpkins, mc Georgia 48, cb 85, Roanoke.
Weathers, William, ng, cb 87, High Shoals.
Black, Nathaniel Spragins, mc univ New York 61, Russell 87, Louisia.
Stevens, Reuben Calvin, mc Atlanta Southern 92, cb Cleburne 97, Graham.
Vineyard, James Leonard, mc Georgia Reform 49, cb 79, Rock Mills.
Total 7.

Moved out of the county—James Ratchford Taylor, mc Atlanta 98, cb 98, from Eastaboga to Calhoun county.

Examinations—E. Pierce Green, mc Georgia 99, certificate granted; John Thomas Striplin, mc Georgia 99, certificate granted; Charleton Thompson, mc phy and surg Atlanta 99, certificate granted.

Deaths—James Clegg, mc Georgia Reform 49, cb 89, Almond, June 24, 1899, of cystitis; Anderson Welcome Duke, mc Graffenburg 49, cb 79, Graham, Auguss 4, 1899, of Apoplexy.

RUSSELL COUNTY MEDICAL SOCIETY—Tuscaloosa, 1877.

OFFICERS.

President, A. R. Allen; Vice-President, John Paschal; Secretary, W. B. Prather; Treasurer, W. B. Prather; Health Officer, W. B. Prather. Censors—T. A. Johnson, J. P. Norris, G. D. Paschal, W. B. Prather.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Allen, Arthur Redding, mc Atlanta 96, cb 98, Oswichee.
Echols, Moses Mason, mc Alabama 97, cb Macon 97, Girard.
Gann, William F., mc univ Louisville —, cb —, Columbus, Ga.
Hendrick, Frank Gustavus, mc univ Louisville 94, cb Pike 94, Crawford.
Johnson, Thomas Abner, mc univ Tennessee 80, cb 83, Jernigan.
Joiner, William Thomas, mc Atlanta 91, cb 91, Pittsboro.
Norris, John Pinkney, mc Atlanta 91, cb 91, Uhland.
Paschal, George Dennis, mc univ New York 72, cb 87, Hurtsboro.
Paschal, John, mc Atlanta 98, cb 98, Glennville.
Prather, William Butler, mc Atlanta 74, cb 88, Seale.
Smith, Reuben Arnold, mc univ New York 52, cb 87, Hatchechubbee.
Total, 11.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Hendrick, Walter Branham, mc univ Louisville 90, cb Pike 90, Hurtsboro.
Howard, Thomas Watson, ng, cb 88, Girard.
Phillips, Lovic Wynn, mc univ Tulane —, cb —, Columbus, Ga.
Prather, Robert Clark, mc Alabama 98, cb —, Girard.
Total, 4.

Examinations—F. C. Caffee (col), mc Meharry, 99 certificate granted; E. W. Allen (col), mc Meharry, 99, certificate granted; J. G. Evans, mc Alabama, 99, certificate granted; E. W. Jenkins, mc New York 99, certificate granted.

*SHELBY COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, E. G. Givhan; Vice-President, H. I. Williams; Secretary, J. R. Morgan; Treasurer, J. R. Morgan; Health Officer, J. H. Gunn. Censors—J. R. Morgan, W. S. DuBose, J. H. Williams, D. L. Wilkinson, H. C. McAdams.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Blevins, John Falkner, mc univ Louisiana 59, cb Dallas 78, Calera.
Boyer, Joseph Buford, mc S of M Kentucky 92, cb 92, Wilsonville.
DuBose Wilds Scott, mc Atlanta 58, cb 78, Columbiana.
Edwards, David W., mc Atlanta 66, cb 78, Wilsonville.
Fields, James G., old law, cb 78, Calera.
Givhan, Edgar Gilmore, mc Alabama 94, cb Chilton 94, Montevallo.
Gunn, James Hamlin, mc Bellevue 69, cb 78, Calera.
Hargrove, Robert Harris, mc Bellevue 72, univ Vanderbilt 86, cb 78 Maylene.
McAdams Henry Clay, mc Alabama 82, cb Mobile 82, Shelby.
Morgan, Joseph Reid, mc univ Louisville 66, cb 78, Shelby Springs.
Nelson, Thomas Green, mc univ National, Lebanon, O., 93 cb 93, Harpersville.
Oliver, Christopher Carlton, mc Atlanta 69, cb 78, Calera.
Smith, Garland Henry, mc Alabama 87, cb 90, Pelham.
Wilkinson, David Leonidas, mc univ Tulane 94, cb Autauga 94, Montevallo.
Williams, Hartwell Isaac, mc Alabama 87, cb 87, Columbiana.
Williams, John Harford, mc univ Louisville 75, cb 78, Columbiana.
Total, 16.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Acker, James Wilson, old law, cb Tuscaloosa 78, Montevallo.
Chandler, Edward Pendleton, old law, cb 79, Vincent.
Denson, Eli Forest, mc univ Vanderbilt 79, cb 79, Pelham.
DuBose, Frank Dudley, mc South Carolina —, cb 78, Shelby.
Goodson, Jasper, old law, cb Tuscaloosa 78, Siluria.
Griffin, Alpheus J., old law, cb 78, Lawley.
Hays, William S., mc Alabama 87, cb 87, Helena.
Johnson, Joseph Madison, mc univ Vanderbilt 83, cb 83, Pelham.
McGraw, Allen Edward, mc univ Louisiana 73, cb 78, Vincent.
Smothers, B. H., mc —, cb —, Weldon.
Tucker, Milton Robert, old law, cb 78, Helena.
Total, 11.

*NOTE.—As no report has been received from Shelby county this year the report for 1899 is here reproduced.

ST. CLAIR COUNTY MEDICAL SOCIETY—Eufaula, 1878.

OFFICERS.

President, D. E. Cason; Vice-President, J. M. McLaughlin; Secretary, J. W. Ash; Treasurer, J. W. Ash; Health Officer, D. E. Cason. Censors—J. W. Ash, J. T. Brown, J. H. Martin.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Ash, John Winston, mc univ Tulane 80, cb 80, Springville.
Bass, John Burrell, mc phy and surg Baltimore 70, cb 78, Ashville.
Beason, William A., mc phy and surg Baltimore 92, cb 93, Ashville.
Brown, Jackson Tucker, mc Birmingham 97, cb 98, Riverside.
Cason, Davis Elmore, mc univ Nashhville 73, cb 78, Ashville.
Cason, Jas. Calvin, mc Memphis —, cb 85, Coal City.
Crump, James Wells, mc Atlanta 75, cb 78, Steel's Depot.
McLaughlin, James Madison, mc —, state board 80, Springville.
Vandergrift, Washington Franklin, mc univ Tulane 80, cb 80, Branchville.
Harris, Esau A., mc —, cb 99, Coal City.
Jones, Jas. Hunter, mc —, cb Calhoun 78, Ragland.
Martin, Jno. Howard, mc Mobile 99, cb Blount 99, Springville.
McClellan, Robert S., mc Alabama 97, cb 97, Easonville.
Total, 13.

Honorary Members.

Jones, James Hunter, mc —, cb —, Ragland.
Crump, James Wells, mc Atlanta 75, cb 78, Steele's Depot.
Total 2.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Alverson, Robert F., mc Alabama 93, cb 93, Coal City.
Crump, Henry Green, old law, cb 79, Seddon.
Embry, James Carl, mc univ Georgia 89, cb 90, Cropwell.
Garlington, Henry Spright, mc Alabama 87, cb 87, Ragland.
Hamilton, Charles Henry, old law, cb 79, Eden.
Ware, John Blassingame, old law cb 79, Kelley's Creek.
Total, 6.

Illegal Practitioners.

Edmundson, ——, Steels.

Moved into the county—John H. Martin, from Blount county to Springville; Robt. S. McClelland, from —— to Spring Valley.

Moved out of the county—William M. Turner, from Riverside to Anniston; Baxter Rittenberry, from Riverside to Birmingham.

Examinations—Esau A. Harris, Coal City, certificate granted; Baxter Rittenberry, Riverside, certificate granted.

Deaths—Richard Proctor Evans.

SUMTER COUNTY MEDICAL SOCIETY—Mobile, 1876.

OFFICERS.

President, W. J. McCain; Vice-President, T. J. Bickley; Secretary, D. S. Brockway; Treasurer; D. S. Brockway; Health Officer, D. S. Brockway. Censors—D. S. Brockway, M. B. Cameron, T. J. Bickley, W. J. McCain, A. L. Vaughan.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bancroft, Joseph Dosier, mc univ Vanderbilt 94, cb 94, Sumterville.
Bickley, Thomas Jefferson, mc univ Vanderbilt 81, cb 81, Gainesville.
Brockway, Dudley Samuel, mc Jefferson 81, cb 81, Livingston.
Cameron, Mathew Bunyan, mc Alabama 86, cb 86, Sumterville.
Gilmore, John Neil, mc New York —, cb 78, Gaston.
Hale, Robert Hadden, mc univ Louisville 79, cb 80, York.
Hearn, William Thomas, mc univ Louisville 82, cb 82, York.
McCain, William Jasper, mc Alabama 91, cb 91, Livingston.
Parham, John Calhoun, mc S of M Kentucky 77, cb 78, Gainesville.
Reed, John H. G., mc univ Louisville 90, Epps.
Scales, John Patton, mc univ Louisville 97, cb 98, Brewersville.
Shamberger, William Brantley, mc univ Louisville 84, cb Choctaw 85, Rosser.
Shaw, Robert Eugene, mc Alabama 97, cb Mobile 97, Epps.
Stallsworth, F. B., mc Alabama 99, cb 99, Cuba.
Vaughan, Amos Lemuel, mc univ Louisville 84, cb 84, Cuba.
Total, 15.

Honorary Members.

James, William Hamilton, mc —, cb 78, York.
Sholl, Edward Henry, mc med and surg Pennsylvania 56, cb 78, Birmingham.
Ward, Henry Bascom, mc Alabama 78, cb 78, Cuba.
Total, 3.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Carr, Paul Ellington, mc univ Louisville 91, cb 91, Warsaw.
Harris, Evan P., mc univ Louisiana 69, cb 78, Rosser.
Nash, James Toney, mc univ Louisville 80, cb 80, Livingston.
Total, 3.

Moved out of the county—P. L. Hagler, from Gainesville to Tuscaloosa.

Examinations—F. B. Stallsworth, mc Alabama 99, certificate granted.

Deaths—Darby Henagan, mc South Carolina 77, cb 78, Epps, of heart disease; J. D. Henagan, mc Alabama 91, cb 94, Epps, of pneumonia.

TALLADEGA COUNTY MEDICAL SOCIETY—Anniston, 1886.

OFFICERS.

President, W. F. Thetford; Vice-President, B. B. Simms; Secretary, W. G. Harrison; Treasurer, B. B. Simms; Health Officer, W. G. Harrison. Censors—J. T. Harrison, B. B. Simms, J. S. McCants, S. W. Welch, Geo. A. Hill.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Barker, Erastus Thomas, mc Memphis 99, cb Cleburne 99, Estaboga.
Bishop, Wallace Beverly, ng, state board 95, Talladega.
Caffey, Hugh T., mc —, cb —, ———.
Cason, Eugene P., mc Alabama 90, cb St. Clair 90, Talladega.
Calvin, James Pickett, mc S of M Kentucky 91, cb Macon 91, Ragan.
Coker, Charles Francis, ng, cb Clay 87, Ragan.
Craddock, Felix Hood, mc univ Vanderbilt 95, cb 95, Sylacauga.
Dixon, John, mc Jefferson 56, cb 86, Fayetteville.
Donaldson, John Thaddeus, mc South Carolina 67, cb 86, Estaboga.
Hamilton, William Thomas, mc Alabama 80, cb Mobile 80, Talladega.
Harrison, John Tinsely, mc Atlanta 81, cb 86, Talladega.
Harrison, William Groce, mc univ Maryland 92, cb 92, Talladega.
Heacock, John William, mc univ Louisiana 66, cb 86, Alpine.
Hill, George Armstrong, mc Jefferson 70, cb 86, Wynette.
Hutchinson, W. H., mc Chattanooga 93, cb St. Clair 97, Childersburg.
Kent, T. J., mc Alabama 97, cb Coosa 97, Fayetteville.
Laird, Bushard Foley, mc Ohio Med. 74, cb Coosa 99, Talladega.

McCants, John Samuel, mc Atlanta 66, cb 86, Talladega.
Powell, Thomas Jefferson, mc univ Maryland 66, cb 86, Childersburg.
Pugh, Braxton Bragg, mc Alabama 89, cb Clarke 98, Ironaton.
Simms, Benjamin Brit, mc Jefferson 85, cb Coosa 86, Talladega.
Sims, Albert Gallatin, mc univ Nashville 69, cb 86, Renfro.
Thetford, William Fletcher, mc univ Louisiana 67, cb Greene 78, Talladega.
Welch, Samuel Wallace, mc phy and surg Baltimore 93, cb 93, Talladega.
Whitten, Edgar Hinton, mc Alabama 88, cb 89, Munford.
Wrenn, Edward Bailey, mc Alabama 90. cb 90, Talladega.
Total 24.

Honorary Members.

Hendricks, Humphrey Green, mc Philadelphia 52, cb 86, Talladega.
Stockdale, John Lark, mc South Carolina 54, cb 86, Boswell.
Taylor, William, mc Louisiana 52, cb 86, Talladega.
Vandiver, John Harrington, mc Jefferson 45, cb 86, Talladega.
Welch, William Americus, mc Jefferson 48, cb 86, Alpine.
Total, 5.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Bailey, Robert Emmett, mc Atlanta 66, cb 86, Silver Run.
Brooks, Alpheus Olin, mc Atlanta Southern 87, cb Clay 87, Lincoln.
Castleberry, William Trice, mc Georgia 72, cb 86, Lincoln.
Coker, Marion Jackson, nf, cb Clay 87, Sylacauga.
Conway, Magnus Eli, mc univ Vanderbilt 88, cb 88, Sylacauga.
Harris, Daniel Blake, mc Atlanta Southern 97, cb Clay —, Munford.
Pearson, James Emmett, mc Alabama 88. diploma recorded, Sylacauga.
Sorrel, William Henry, ng, cb 82, Sylacauga.
more.
Whitten, Edgar Hinton, mc Alabama 88, cb 89, Munford.
ford.
Total 9

Moved into the county—B. F. Laird, mc Ohio 74, cb Coosa 99, from Coosa county to Talladega; Hugh T. Caffey, from —— to ——; Wm. Henry Harrison, mc univ Tennessee 93, cb Barbour, from —— to Kymulga; Eugene P. Cason, mc Alabama 90, cb St. Clair 90, from —— to Talladega.

Moved out of the county—William Drayton Caldwell, from Kymulga to Etowah county; J. R. Taylor, from Estaboga to Calhoun county.

TALLAPOOSA COUNTY MEDICAL SOCIETY—Selma, 1879.

OFFICERS.

President, A. J. Nolen; Vice-President, E. W. Hart; Secretary, A. LaF. Harlan; Treasurer, R. V. Salmon; Health Officer, A. LaF. Harlan. Censors—George W. Vines, J. A. Goggans, A. J. Coley, R. V. Salmon, A. LaF. Harlan.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Bruce, Homer S., mc Atlanta 91, cb Chambers 91, Camp Hill.
Carleton, William George, mc univ Vanderbilt 82, cb 82, Dudleyville.
Coley, Andrew Jackson, mc Jefferson 80, cb 81, Alexander City.
Goggans, James Adrian, mc univ New York 77, cb 82, Alexander City.
Hamner, Harper Talliaferro, mc univ Vanderbilt 89, cb Chambers 90, Camp Hill.
Harlan, Aaron LaFayette, mc Alabama 86, cb 86, Alexander City.
Harlan, John James, mc Alabama 72, cb 82, Dadeville.
McLendon, Joseph Wyley, mc Jefferson 88, cb 88, Dadeville.
Motley, J. P. mc univ Atlanta Southern 86, cb 86, Motley.
Hart, Eugene Walker, mc Baltimore 91, cb 91, Walnut Hill.
Langley, O. V., mc Atlanta 95, cb 96, Camp Hill.
Lightfoot, Robert W., mc South Carolina 62, cb 82, Alexander City.
Nolen, Abner Jackson, mc Louisville 80, cb Coosa 82, New Site.
Nolen, Isaac Daniel, mc univ Louisville 92, cb Coosa 92, New Site.
Radford, George Clements, ng, cb Clay 87, Bulgers.
Reagan, Onslow, ng, cb 82, Alexander City.
Salmon, Robert Vaughn, mc Alabama 75, cb 82, Dadeville.
Shepard, Orlando Tyler, mc Graffenburg 54, cb 82, Tohopeka.
Smith, Watt Francis, mc Graffenburg 54, cb 82, Thaddeus.
Vines, George Washington, mc univ Tulane 72, cb 82, Dadeville.
Ward, Lucius Cincinnatus, ng, cb 82, Daviston.
Total, 21.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Banks, Joseph W., mc Alabama 90, cb —, Jackson's Gap.
Langley, W. T., mc Alabama 99, cb 99, Camp Hill.
Shepard, Philip Madison, mc Graffenburg 54, cb 82, Dadeville.
Spier, Alfred Alexander, ng, cb 80, Dudleyville.
Wallace, J. Marvin, mc univ Vanderbilt 99, cb Elmore 99, East Tallassee.
Total, 5.

Moved into the county—J. Marion Wallace, from Elmore county to East Tallassee; McLendon ———, from Chambers county to Hackneyville.

Moved out of the county—W. J. Harlan, from Hackneyville to Roane, Texas; George McDaniel Calloway, from Pinckneyville to Anson, Texas.

TUSCALOOSA COUNTY MEDICAL SOCIETY—Birmingham, 1877.

OFFICERS.

President, A. B. C. Nichols; Vice-President, Wm. M. Faulk; Secretary, T. M. Leatherwood; Treasurer, T. M. Leatherwood; Health Officer, Robert Neilson. Censors—J. L. Williamson, J. L. Fant, W. G. Somerville, Sydney Leach, T. M. Leatherwood.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Fant, Joseph Louis, mc South Carolina 76, cb Marengo 78, Tuscaloosa.
Faulk, William Mark, mc Alabama 97, cb Barbour 97, Tuscaloosa.
Hitchcock, Matthew Sims, mc univ Louisville 93, cb Dallas 93, Brookwood.
Jackson, Robert Dandridge, mc South Carolina 51, cb Dallas 78, Brookwood.
Leach, Sydney, mc univ Virginia 96, cb 97, Tuscaloosa.
Leatherwood, Timothy Miles, mc Alabama 91, cb 91, Tuscaloosa.
Little, John, mc univ Louisiana 69, cb 78, Tuscaloosa.
Malloy, Martin Luther, mc Alabama 99, cb Lee 99, Tuscaloosa.
Mayfield, Surry Foster, mc univ Tulane 96, cb 96, Northport.
Nichols, Andrew Berry Cook, mc univ Philadelphia 69, cb 78, Tuscaloosa.
Perry, Samuel Miller, mc univ Vanderbilt 95, cb 95, Samantha,
Rau, George Reneau, mc univ of the South (Sewanee) 94, cb —, Tuscaloosa.
Searcy, James Thomas, mc univ New York 67, cb 78, Tuscaloosa.
Somerville, William Glassell, mc phy and surg New York 89., cb 89, Tuscaloosa.
Trimm, James Lewis, mc Alabama 81, cb 81, Northport.
Williamson, James Lewis, mc Alabama 81, cb 81, Tuscaloosa.
Total, 16.

Honorary Member.

Neilson, Robert, mc univ Georgia 51, cb 78, Tuscaloosa.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Black, ——, mc —, cb —,Goethite.
Caldwell, Washington Jackson, ng, cb 84, Hull.
Clements, Alsey, ng, cb 78, Vance.
Clifton, John Montgomery, mc Alabama 88, cb 88, Cottondale.
Cannon, Daniel Pugh, mc univ Vanderbilt, cb Bibb 95, Coaling.
Donoho, John, mc —, cb —, Fox.
Doughty, Willie Burton, mc Louisville 96, cb Fayette 96, Falls.
Foster, Ezra, ng, cb 78, Brookwood.
Hagler, Prewett LaFayette, mc Alabama 91, cb 91, Tuscaloosa.
Olive, George Washington, mc Alabama 82, cb 83, New Lexington.
Patterson, Madison Knox, mc univ Tulane 91, cb Green 91, Foster's.
Russey, James W., mc Louisville 76, cb —, Cottondale.
Sellers, E. M., mc —, cb —, Milldale.
Taylor, William Thomas, mc Alabama 93, cb Green 93, Hickman.
Thompson, James W., ng, cb —, Taylorsville.
Toomey, Mark Anthony, ng, cb 78, Pearl.
Weaver, George Augustus, (col) mc univ Howard 97, cb 98, Tuscaloosa.
Wilkinson, J. G., mc —, cb —, Humphrey's.
Smothers, Wm. onas, mc Alabama —, cb —, Moore's Bridge.
Smitners Lee, mc Alabama 99, cb —, Moore's Bridge.
Total, 24.

Moved into the county—John Donoho, from Pickens county to Fox.

Moved out of the county—Douglass Pearson Beatty, from Hull to Atlanta, Ga.; Gabriel C. Boudousque, from Tuscaloosa to Mobile; Nathaniel Herbert Carpenter, from Foster's to Knoxville, Green county.

Examinations—J. Hester Ward, certificate granted; H. L. Riley (colored), certificate granted.

Deaths—D. C. Asher; William Washington Elrod; Willis Mackey; Charles Richard McCord.

WALKER COUNTY MEDICAL SOCIETY—Mobile, 1876.

OFFICERS.

President, J. A. Goodwin; Vice-President, G. S. Guilder; Secretary, D. M. Davis; Treasurer, D. M. Davis; Health Officer, A. M. Stovall. Censors—J. A. Goodwin, A. M. Stovall, W. L. Gravlee, C. B. Jackson, D. M. Davis.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Ballenger, Joseph William, mc univ Vanderbilt 84, cb Cullman 87, Carbon Hill.

Camak, David Hubbard, old law 71, cb 84, Jasper.

Davis, Daniel M., mc Atlanta 94, cb 94, Cordova.

Deweese, Thomas Peters, mc univ Vanderbilt 85, cb 85, Gamble Mines.

Downing, William H., mc Memphis Hospital 96, cb Marion 97, Cordova.

Fleming, James A., mc Mobile 70, cb old law —, Horse Creek.

Goodwin, Joseph Anderson, mc Alabama 74, cb 78, Jasper.

Gravlee, William Lewis, mc univ Nashville 82, cb 82, Patton Junction.

Guilder, George S., mc Alabama 94, cb 94, Galloway.

Hendon, Albert Lucretius, old law 78, cb 78, Townley.

Jackson, Charles Beuford, mc Atlanta 85, cb Tallapoosa 85, Horse Creek.

Manasco, John, old law 76, cb 81, Townley.

Manasco, Titus, mc Memphis Hospital 96, cb 96, Townley.

Miller, John M., mc univ Vanderbilt 85, Cordova.

Odum, James Newton, mc Memphis Hospital 94, cb 94, America.

Rosamond, William Cooper, old law, 55, cb 81, Jasper.

Stovall, Andrew McAdams, mc Louisville 80, cb 81, Jasper.

Total, 17.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Dearth, James Kitridge, ng, cb 88, Jasper.

Gallagher, Larkin, mc Alabama 95, cb 95, Eldridge.

Lynn, John Wesley, mc Atlanta 60, cb 81, Carbon Hill.

Masterson, William T., mc univ Louisville 91, cb Franklin 91, Oakman.

Phillips, Alfred B., univ Vanderbilt 85, cb 85, Horse Creek.

Stephenson, Hugh Watson, mc Alabama 80, cb Lawrence 88, Oakman.

Woodson, John A., univ Vanderbilt 92, cb 93, Coal Valley.
Woodson, Landon Aubry, univ Virginia 61, cb 91, Patton.
Gerganns, William, mc Chattanooga 94, cb —, Oakman.
Whitney, O. H., mc Louisville 90, cb —, Fayette.
Total, 10.

WASHINGTON COUNTY MEDICAL SOCIETY—Tuscaloosa, 1887.

OFFICERS.

President, J. Gordon; Vice-President, J. W. Wood; Secretary, F. A. Webb; Treasurer, F. A. Webb; Health Officer, W. E. Kimbrough. Censors—John Gordon, W. C. McCanon, Charles LeBaron.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Dugger, Llewellyn Ludwig, mc Alabama 98, cb Mobile 99, Fairford.
Gordon, John, mc Ohio 66, cb 87, Healing Springs.
Kimbrough, William E., mc univ Alabama —, cb 87, St. Stephens.
LeBaron, Charles, mc Alabama 89, cb 96, Yellow Pine.
McCanon, Campbell Wallace, mc phy and surg Keokuk, Iowa 80, cb 96, Deer Park.
Shoemaker, Walton Worthy, mc Alabama 92, cb 92, Frankville.
Webb, Francis Asbury, mc Alabama 81, cb 91, Calvert.
Wood, John Wesley, mc univ Virginia 60, cb 87, Healing Springs.
Total, 8.

Moved into the county—Llewellyn Ludwig Dugger, from Mobile to Fairford.

*WILCOX COUNTY MEDICAL SOCIETY—Eufaula, 1887.

OFFICERS.

President, J. P. Jones; Vice-President, L. E. Starr; Secretary, R. H. Kilpatrick; Treasurer, R. H. Kilpatrick; Health Officer, R. H. Kilpatrick. Censors—L. E. Starr, J. J. Harris, W. M. Burroughs, A. B. Curtis, W. T. Purnell.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Adams, David, mc Georgia 68, cb 81, Pine Apple.
Benson, James C., mc Alabama 87, cb 87, Camden.
Bonner, James Isaac, mc Alabama 78, cb 79, Rosebud.
Burroughs, William M., mc univ Tennessee 91, cb Clarke 92, Pine Hill.

Curtis, Alonzo Bittle, mc Alabama 79, cb 82, Lower Peach Tree.
Curtis, Christopher Columbus, mc Alabama 82, cb 82, Lower Peach Tree.
Dale, William Bonner, mc univ Louisiana 61, cb 79, Allenton.
Gaston, David Finis, mc univ Louisiana 82, cb 82, Gastonburg.
Godbold, John Calhoun, mc Alabama 79, cb 79, Nellie.
Haddox, William Thomas, mc univ Louisiana 58, cb 79, Pine Hill.
Harris, John James, mc univ New York 88, cb Tuscaloosa 88, Furman.
James, John Paul, mc univ Louisiana 61, cb 82, Camden.
James, Joseph Harvey, mc univ Louisville 80, cb 82, Allenton.
Jenkins, Thomas Griffin, mc univ Louisiana 48, cb 79, Camden.
Jones, Thomas Warburton, mc phy and surg New York 90, cb 90, Camden.
Kilpatrick, Rufus Hall, mc Alabama 88, cb 88, Camden.
Kimbrough, Franklin Flavius, mc Alabama 90, cb 90, Camden.
Kimbrough, John Henry, mc Alabama 94, cb 94, Catherine.
Lee, Thomas, mc South Carolina 57, cb 80, Furman.
McDaniel, Edward Davies, mc South Carolina 57, cb 79, Camden.
Palmer, Ransom Dabney, mc univ Louisiana 86, cb 86, Furman.
Purifoy, John Howard, mc Jefferson 59, cb 81, Furman.
Purnell, William Thomas, mc Alabama 76, cb 79, Prairie Bluff.
Ramsey, David Wardlaw, mc univ Louisiana 70, cb 78, Pine Apple.
Spurlin, George Green, mc univ Louisiana 92, cb 92, Camden.
Starr, Lucius Ernest, mc Alabama 61, cb 79, Camden.
Thigpen, Jefferson, mc univ Louisville 93, cb 94, Furman.
Watson, William Waldred, mc univ Virginia 87, cb 87, Furman.
Wall, Richard Albert, mc univ Tulane 94, cb Butler 94, Ackerville.
Total, 29.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Cole, William W., mc univ Pennsylvania 50, cb —, Snow Hill.
Cook, Samuel Benjamin H., ng, cb 85, Pine Hill.
Hawthorne, Samuel McC., mc Alabama 89, cb —, Pine Apple.
Kimbrough, W. E., mc univ Louisiana —, cb —, Pine Hill.
King, Edward Doak, mc —, cb —, Lower Peach Tree.
Lee, John Francis, mc univ Nashville 80, cb 83, Allenton.
Williams, W. H., mc —, cb Clarke —, Sunny South.
Total, 7.

*NOTE.—As no report has been received from Wilcox county this year, the report for 1899 is here reproduced.

WINSTON COUNTY MEDICAL SOCIETY—Montgomery, 1888.

OFFICERS.

President, J. A. McCullar; Vice-President, A. S. Palmer; Secretary, H. C. Johnson; Treasurer, H. C. Johnson; Health Officer, J. C. Taylor. Censors—J. C. Taylor, A. S. Palmer, H. C. Johnson, J. A. McCullar.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POST-OFFICES.

Corns, Christian Zimmer, mc univ Vanderbilt 99, cb 1900, Delmar.
Johnson, Harvey Calaway, mc Alabama 85, cb 85, Nauvoo.
McCullar, James Alexander, mc univ Vanderbilt 99, cb 99, Double Spring.
Palmer, Alexander S., ng, Marion —, cb 89, Natural Bridge.
Taylor, Joseph Calhoun, mc Alabama 88, cb 89, Haleyville.
Total, 5.

PHYSICIANS NOT MEMBERS OF THE SOCIETY.

Adkins, William Riley, old law, cb Tuscaloosa 78, Double Springs.
Bonds, William Riley, mc Alabama 92, Double Springs.
Carroll, David, old law, cb Blount 78, Double Springs.
Hood, John Wesley, old law, cb 90, Addison.
Roden, Benjamin Wesley, old law, cb Marion 89, Haleyville.
Total, 6.

Moved into the county—C. Z. Corns, from Jefferson county to Delmar.

Examinations—James Alexander McCullar, mc univ Vanderbilt 99, certificate granted; Christian Zimmer Corns, mc univ Vanderbilt 99, certificate granted.

ROLL OF THE COLLEGE OF COUNSELLORS.

REVISION OF 1900.

THE GRAND SENIOR LIFE COUNSELLORS.

Abernathy, William Henry, Tinela—Montgomery session.....1875
Cason, Davis Elmore, Ashville—Huntsville session.....1880
Furniss, John Perkins, Selma—Mobile session.....1876
Gaines, Vivian Pendleton, Mobile—Selma session.....1879
Gaston, John Brown, Montgomery—Montgomery session.....1875
Hayes, Robert Hughes, Union Springs—Huntsville session.....1880
Hogan, Samuel Mardis, Montgomery—Montgomery session.....1875
Jackson, Robert Dandridge, Brookwood—Tuscaloosa session....1873
Jackson, Walter Clark, Montgomery—Tuscaloosa session.....1873
Ketchum, George Augustus, Mobile—Tuscaloosa session.....1873
McKinnon, John Alexander, Selma—Mobile session.....1876
McKittrick, Adam Alexander, Evergreen—Tuscaloosa session...1873
Michel, Richard Frazer, Montgomery—Tuscaloosa session.....1873
Prince, Francis Marion, Bessemer—Birmingham session.....1877
Sanders, William Henry, Mobile—Eufaula session.....1878
Starr, Lucius Ernest, Camden—Selma session.....1874
Sholl, Edward Henry, Birmingham—Huntsville session.....1880
Thomas, James Grey, Mobile—Huntsville session.....1880
Total, 18.

THE GRAND SENIOR COUNSELLORS.

Baldwin, Benjamin James, Montgomery—Anniston session.....1886
Bragg, Shirley, Montgomery—Greenville session.....1885
Brockway, Dudley Samuel, Livingston—Mobile session.....1882
DeWeese, Thomas Peters, Gamble Mines—Birmingham session.1890
Fletcher, Richard Matthew, Sr., Huntsville—Montgomery session.1881
Franklin, Charles Higgs, Union Springs—Mobile session.....1882
Goggans, James Adrian, Alexander City—Birmingham session..1883
Goode, Rhett, Mobile—Mobile session.....1889
Goodwin, Joseph Anderson, Jasper—Mobile session.....1882
Harlan, John Jefferson, Hackneyville—Montgomery session....1888

Hill, Luther Leonidas, Montgomery—Montgomery session.....1888
Huggins, Jacob, Newbern—Selma session.....1884
Inge, Henry Tutwiler, Mobile—Greenville session.....1885
Jay, Andrew, Evergreen—Mobile session..... 1882
Jones, Capers Capehart, East Lake—Montgomery session.....1881
Kendrick, Joel Cloud, Greenville—Mobile session.....1882
LeGrand, John Clark, Birmingham—Mobile session.....1889
Lowry, Samuel Hickman, Huntsville—Greenville session.....1885
Maréchal, Edwin Lesley, Mobile—Mobile session.....1889
Nolen, Abner Jackson, New Site—Anniston session.....1886
Redden, Robert James, Sulligent—Tuscaloosa session.....1887
Robertson, Thad. Lindley, Birmingham—Montgomery session..1881
Searcy, James Thomas, Tuscaloosa—Selma session.....1884
Sledge, William Henry, Mobile—Mobile session.....1882
Stovall, Andrew McAdams, Jasper—Mobile session.....1882
Thetford, William Fletcher, Talladega—Montgomery session...1881
Trent, Powhatan Green, Roanoke—Selma session.....1884
Whaley, Lewis, Birmingham—Anniston session.....1886
Wheeler, William Camp, Huntsville—Montgomery session.....1888
Wilkerson, Wooten Moore, Montgomery—Birmingham session..1883
Wilkerson, Charles A., Marion—Birmingham session.....1890
Total, 31.

THE SENIOR COUNSELLORS.

Andrews, Glenn, Montgomery—Selma session.....1893
Bell, Walter Howard, Oxford—Birmingham session.. 1894
Blake, Wyatt Heflin, Wetumpka—Montgomery session.... 1892
Bondurant, Eugene DuBose, Mobile—Birmingham session.....1894
Brown, George Summers, Birmingham—Birmingham session..1894
Cameron, Matthew Bunyan, Sumterville—Selma sesion.....1893
Cunningham, Russell McWhorter, Birmingham—Selma session..1893
Davis, William Elias Brownlee, Birmingham—Mobile session..1895
Desprez, Louis Willoughby, Russellville—Mobile session.....1895
Duggar, Reuben Henry, Gallion—Montgomery session.... 1892
Frazer, Tucker Henderson, Mobile—Mobile session.....1895
Gay, Samuel Gilbert, Selma—Selma session..... 1893
Harper, Robert Franklin, Ozark—Birmingham session.... 1894
Heflin, Wyatt, Birmingham—Selma session..... 1893
Hill, George Armstrong, Wynette—Birmingham session.....1894
Hunter, Henry Mitchell, Union Springs,—Selma session.....1893

Howle, James Augustus, Jordan—Mobile session.....1895
Johnston, Louis William, Tuskegee—Mobile session.....1895
King, Goldsby, Selma—Selma session 1893
McCants, Robert Beall, Demopolis—Selma session.....1893
McLaughlin, James Madison, Springville—Birmingham session..1894
Moody, Henry Altamont, Bailey Springs—Birmingham session.1894
Moon, William Henry, Goodwater—Selma session.....1893
Parke, Thomas Duke, Birmingham—Selma session.....1893
Perry, Henry Gaither, Greenville—Birmingham session.....1894
Quin, William Everett, Fort Payne—Birmingham session.....1894
Riggs, Edward Powell, Birmingham—Birmingham session....1894
Sutton, Robert Lee, Orrville—Mobile session.....1895
Swann, Joseph Charles, Wedowee—Mobile session.....1895
Williams, John Harford, Columbiana—Birmingham session....1894
Watkins, Isaac LaFayette, Montgomery—Selma session.....1893
Whitfield, Bryan Watkins, Demopolis—Montgomery session..1892
Wilkinson, John Edward, Prattville—Montgomery session....1892
Total 33.

THE JUNIOR COUNSELLORS.

Bancroft, Joseph Dozier, Sumterville—Mobile session.....1899
Brannon, Henry Lee, Eufaula—Selma session.....1897
Bennett, Benjamin Franklin, Clayton—Birmingham session...1898
Dixon, John, Fayetteville—Selma sesion.....1897
Dryer, Thomas Edmund, Huntsville—Birmingham session....1898
Gaston, Joseph Lucius, Montgomery—Mobile session.....1899
Guice, Charles Lee, Gadsden—Mobile session.....1899
Harlan, Aaron LaFayette, Alexander City— Birmingham sesion..1898
Harrison, William Groce, Talladega—Montgomery session.....1896
Henderson, Stephen Cory, Brewton—Mobile session.....1899
Henley, Albert Thomas, Birmingham—Birmingham session....1898
Hill, Robert Sommerville, Montgomery—Birmingham session..1898
Jones, Julius, Rockford—Montgomery session.....1896
Jones, Eli Spears, Gadsden—Selma session.....1897
Justice, Oscar Suttle, Wetumpka—Mobile session.....1899
McCain, William Jasper, Livingston—Birmingham session.....1898
McEachern, John Adolphus, Brundidge—Selma session.....1897
Moody, Fleming Isaac, Dothan—Montgomery session.....1896
Pearson, Benjamin Rush, Montgomery—Birmingham session...1898
Pride, William Thomas, Madison—Mobile session.....1899
Robinson, Thomas Franklin, Bessemer—Montgomery session..1896

Sims, Albert Gallatin, Renfroe—Birmingham session.....1898
Waller, George Platt, Montgomery—Montgomery session.....1896
Welch, Samuel Wallace, Talladega—Mobile session.....1899
Whitfield, James Bryan, Demopolis—Montgomery session.....1896
Wyman, Benjamin Leon, Birmingham—Selma session.....1897
Total, 26.

THE COUNSELLORS ELECT.

Ard, Erastus Byron, Ozark, Dale county.
Green, Henry, Bolling, Butler county.
Justice, Robert Lee, Geneva, Geneva county.
Lawrence, William John Dougherty, Turkeytown, Etowah county.
Maples, William Caswell, Scottsboro, Jackson county.
Robertson, William Henry, Clayton, Barbour county.
Tam, Silas Springer, Mobile, Mobile county.
Thigpen, Charles Alston, Montgomery, Montgomery county.
Watson, William Waldred, Furman, Wilcox county.
Total, 9.

SUMMARY.

Grand Senior Life Counsellors	18
Grand Senior Counsellors	81
Senior Counsellors	88
Junior Counsellors	26
Counsellors Elect	9
Active Counsellors	117

THE ROLL OF THE COLLEGE OF COUNSELLORS BY CONGRESSIONAL DISTRICTS.

On this roll the names of all counsellors, except those of the Grand Senior Life Counsellors, are given by congressional districts. It is intended to serve as a guide in the election of new counsellors, with a view to the distribution of them in approximate proportion to the number of members in the several districts. It is not considered to be good policy, and it is not considered to be fair and right, to give a few large towns greatly more than their pro rata share of counsellors. The calculations are based on the nearest whole numbers.

THE FIRST DISTRICT.

Names of Counsellors.—E. D. Bondurant, T. H. Frazer, Rhett Goode, H. T. Inge, E. L. Maréchal, R. B. McCants, W. H. Sledge, B. W. Whitfield, J. B. Whitfield, S. S. Tam.

Choctaw,	members	12	counsellors 0
Clarke,	members	17	counsellors 0
Marengo,	members	20	counsellors 3
Mobile,	members	36	counsellors 7
Monroe,	members	16	counsellors 0
Washington,	members	8	counsellors 0
Totals		109	10

THE SECOND DISTRICT.

Names of Counsellors.—Glenn Andrews, B. J. Baldwin, S. Bragg, L. L. Hill, R. S. Hill, A. Jay, J. A. McEachern, B. R.Pearson, G. P. Waller, I. L. Watkins, J. C. Kendrick, W. M. Wilkerson, J. L. Gaston, S. C. Henderson, W. W. Watson, Henry Green, C. A. Thigpen.

Baldwin,	members	7	counsellors 0
Butler,	members	19	counsellors 2
Conecuh,	members	17	counsellors 1
Covington,	members	6	counsellors 0
Crenshaw,	members	18	counsellors 0
Escambia,	members	10	counsellors 1
Montgomery,	members	54	counsellors 11
Pike,	members	15	counsellors 1
Wilcox,	members	29	counsellors 1
Totals		175	17

THE THIRD DISTRICT.

Names of Counsellors.—B. F. Bennett, H. L. Brannon, C. H. Franklin, R. F. Harper, H. M. Hunter, F. I. Moody, W. H. Robertson, R. L. Justice, E. B. Ard.

Barbour,	members.....17	counsellors.....	3
Bullock,	members.....19	counsellors.....	2
Coffee,	members.....12	counsellors.....	0
Dale,	members.....18	counsellors.....	2
Geneva,	members.....16	counsellors.....	1
Henry,	members.....25	counsellors.....	1
Lee,	members.....12	counsellors.....	0
Russell,	members.....11	counsellors.....	0
Totals..... 130		.....	9

THE FOURTH DISTRICT.

Names of Counsellors.—W. H. Bell, J. Dixon, S. G. Gay, W. G. Harrison, J. W. Heacock, G. A. Hill, G. King, A. G. Sims, R. L. Sutton, W. F. Thetford, J. H. Williams, S. W. Welch.

Calhoun,	members.....27	counsellors.....	1
Chilton,	members.....11	counsellors.....	0
Cleburne,	members.....11	counsellors.....	0
Dallas,	members.....31	counsellors.....	3
Shelby,	members.....16	counsellors.....	1
Talladega,	members.....29	counsellors.....	7
Totals... ... .125		.....	12

THE FIFTH DISTRICT.

Names of Counsellors.—W. H. Blake, J. A. Goggans, A. L. Harlan, J. J. Harlan, J. A. Howle, L. W. Johnston, J. Jones, W. H. Moon, A. J. Nolen, J. C. Swann, P. G. Trent, J. E. Wilkerson, O. S. Justice.

Autauga,	members..... 7	counsellors.....	1
Chambers,	members.....17	counsellors.....	0
Clay,	members.....14	counsellors.....	0
Coosa,	members.....12	counsellors.....	2
Elmore,	members.....18	counsellors.....	3
Lowndes,	members.....13	counsellors.....	0
Macon,	members..... 9	counsellors.....	1
Randolph,	members.....21	counsellors.....	2
Tallapoosa,	members.....21	counsellors.....	4
Totals..... 132		.....	13

THE SIXTH DISTRICT.

Names of Counsellors.—D. S. Brockway, M. B. Cameron, T. P. Deweese J. A. Goodwin, W. J. McCain, R. J. Redden, J. T. Searcy, A. M. Stovall, J. D. Bancroft.

Fayette,	members.....10	counsellors.....	0
Greene,	members.....16	counsellors.....	0
Lamar,	members..... 8	counsellors.....	1
Marion,	members..... 7	counsellors.....	0
Pickens,	members.....19	counsellors.....	0
Sumter,	members.....18	counsellors.....	4
Tuscaloosa,	members.....17	counsellors.....	1
Walker,	members.....17	counsellors.....	3
Totals.... 112		.....	9

THE SEVENTH DISTRICT.

Names of Counsellors.—L. W. Desprez, E. S. Jones, J. M. McLaughlin, W. E. Quinn, W. J. D. Lawrence, C. L. Guice.

Cherokee,	members.....13	counsellors.....	0
Cullman,	members.....14	counsellors.....	0
DeKalb,	members.....14	counsellors.....	1
Etowah,	members.....18	counsellors.....	3
Franklin,	members.....17	counsellors.....	1
Marshall,	members.....10	counsellors.....	0
St. Clair,	members.....15	counsellors.....	1
Winston,	members..... 5	counsellors.....	0
Totals.... 106		.....	6

THE EIGHTH DISTRICT.

Names of Counsellors.—T. E. Dryer, R. M. Fletcher, S. H. Lowry, H. A. Moody, W. C. Wheeler, W. T. Pride, W. C. Maples

Colbert,	members.....12	counsellors.....	1
Jackson,	members.....12	counsellors.....	1
Lauderdale,	members.....14	counsellors.....	1
Lawrence,	members.....16	counsellors.....	0
Limestone,	members.....16	counsellors.....	0
Madison,	members.....28	counsellors.....	4
Morgan,	members.....12	counsellors.....	0
Totals..... 110		.....	7

THE NINTH DISTRICT.

Names of Counsellors.—G. S. Brown, R. M. Cunningham, W. E. B. Davis, R. H. Duggar, W. Heflin, A. T. Henley, J. Huggins, C. C. Jones, J. C. LeGrand, T. D. Parke, E. P. Riggs, T. L. Robertson, T. F. Robinson, L. Whaley, C. A. Wilkerson, B. L. Wyman, H. G. Perry.

Bibb,	members	16	counsellors	1
Blount,	members	11	counsellors	0
Hale,	members	18	counsellors	4
Jefferson,	members	107	counsellors	11
Perry,	members	8	counsellors	1
		160		17

GENERAL SUMMARY.

The whole number of members in the State is 1,159, and the whole number of counsellors is 100. This gives one counsellor for every 11.50 members. For convenience, we say one counsellor for every 11 members.

The first district, with 109 members and 10 counsellors, has the number of counsellors that it is entitled to.

The second district, with 175 members and 17 counsellors, has one counsellor more than it is entitled to.

The third district, with 130 members and 9 counsellors, has three counsellors less than it is entitled to.

The fourth district, with 125 members and 12 counsellors, has one counsellor more than it is entitled to.

The fifth district, with 132 members and 13 counsellors, has one more counsellor than it is entitled to.

The sixth district, with 112 members and 9 counsellors, has one counsellor less than it is entitled to.

The seventh district, with 106 members and 6 counsellors, has three counsellors less than it is entitled to.

The eighth district, with 110 members and 7 counsellors, has three counsellors less than it is entitled to.

The ninth district, with 160 members and 17 counsellors, has three counsellors more than it is entitled to.

ROLL OF CORRESPONDENTS.

Revision of 1900.

Bozeman, Nathan, M. D., New York.....1899
Garnett, A. F., M. D., Hot Springs, Ark.....1875
Fletcher, R. M., Jr., Fort Harrison, Montana.....1900
Hoffman, John Richardson, M. D., Athens, Ala.....1890
Mitchell, William Augustus, M. D., Eufaula, Ala.....1891
Moses, Gratz A., M. D., St. Louis, Missouri.....1874
Osborn, Thomas Childress, M. D., Cleburne, Texas.....1885
Peavy, Julius Franklin, M. D., Ashville, N. C.....1899
Rorex, James Polk, M. D., Scottsboro, Ala.....1891

THE ROLL OF OFFICERS.

Revision of 1900.

PRESIDENT:

RUSSELL MCWHORTER CUNNINGHAM, M. D.....Ensley.

VICE-PRESIDENTS:

Senior—SAMUEL GILBERT GAY, M. D.....Selma.
Junior—WILLIAM THOMAS PRIDE, M. D.....Madison.

SECRETARY:

GEORGE PLATT WALLER, M. D.....Montgomery.
(Term expires 1903.)

TREASURER:

HENRY GAITHER PERRY, M. D.....Greensboro.
(Term expires 1903.)

THE BOARD OF CENSORS AND COMMITTEE OF PUBLIC HEALTH.

Robertson, Thaddeus Lindley, Birmingham.....1900-1905
Gaines, Vivian Pendleton, Mobile.....1900-1905
Sholl, Edward Henry, Birmingham.....1899-1904
Andrews, Glenn, Montgomery.....1899-1904
Searcy, James Thomas, Tuscaloosa.....1898-1903
Furniss, John Perkins, Selma..... 1898-1903
Sanders, William Henry, Mobile (Senior Censor).....1897-1902
Maréchal, Edwin Lesley, Mobile, (unexpired term).....1897-1902
Wilkerson, Wooten Moore, Montgomery, (unexpired term).1896-1901
Franklin, Charles Higgs, Union Springs.....1896-1901

ORATOR:

WILLIAM GROCE HARRISON, M. D.....Talladega.

ALTERNATE ORATOR:

BENJAMIN RUSH PEARSON, M. D.....Montgomery.

MONITOR:

WILLIAM ELIAS BROWNLEE DAVIS, M. D.....Birmingham.

HISTORIAN.

JESSE GARY PALMER, M. D.....Opelika.

JEROME COCHRAN LECTURER:

WILLIAM OSLER, M. D., L.L. D.....Baltimore.

STATE HEALTH OFFICER:

WILLIAM HENRY SANDERS, M. D.....Mobile.
(Official residence, Montgomery.)
Term expires 1904.

PLACE OF MEETING—SELMA.

Time of Meeting, Third Tuesday in April, 1901.

SCHEDULE OF REGULAR REPORTERS.

Session of 1901.

(1) R. C. BANKSTON, M. D., Birmingham—
The Future Outlook of Medicine is Toward Prevention.

(2) M. B. CAMERON, M. D., Sumterville—
Pernicious Vomiting in Pregnancy.

(3) A. M. STOVALL, M. D., Jasper—
The Therapeutic Uses of Water.

(4) R. S. HILL, M. D., Montgomery—
Ovarian Cysts.

(5) J. A. GOGGANS, Alexander City—
The Pathology and Treatment of Retro-Uterine Displacements.

(6) C. S. CHENAULT, M. D., Mt. Hope—
Endometritis—Its Treatment in the Home, with Report of Cases.

(7) E. B. WARD, M. D., Selma—
Reflex Neuroses in Women.

(8) L. W. JOHNSTON, M. D., Tuskegee—
Acute Entero-Colitis in Infancy.

(9) F. A. WEBB, M. D., Calvert—
Pathological Conditions Causing Abortion and Premature Labor, with Report of Cases.

(10) WILLIAM GLASSELL SOMERVILLE, M. D., Tuscaloosa—
Necessary Reforms in the Management of Youthful and Insane Criminals.

(11) JUDSON DAVIE, M. D., Cowikee—
Mortality in Our Prison Population.

(12) T. A. Casey, M. D., Albertville—
The Prevention of Infectious Diseases.

(13) Goldsby King, M. D., Selma—
What is the Best Closure and Dressing in Aseptic Cases?

(14) G. Heustis Fonde, M. D., Mobile—
The Microscope in the Hands of the General Practitioner.

(15) H. T. Inge, M. D., Mobile—
Peculiar Forms of Malaria.

(16) H. M. Hunter, M. D., Union Springs—
Hydrocephalus: Its Most Logical Theory, and the Operation Based on Same.

(17) M. W. Murray, M. D., New Decatur—
The Diseases of the Tennessee Valley.

(18) S. W. Welch, M. D., Talladega—
Climatic Effects in Talladega County on Diseases Common in Alabama.

SCHEDULE OF THE ANNUAL SESSIONS AND PRESIDENTS SINCE THE RE-ORGANIZATION IN 1868.

Selma—Albert Gallatin Mabry.....1868
Mobile—Albert Gallatin Mabry.....1869
Montgomery—Richard Frazer Michel.....1870
Mobile—Francis Armstrong Ross.....1871
Huntsville—Thomas Childress Osborn.....1872
Tuscaloosa—George Earnest Kumpé.....1873
Selma—George Augustus Ketchum.....1874
Montgomery—Job Sobieski Weatherly.....1875
Mobile—John Jefferson Dement.....1876
Birmingham—Edward Davies McDaniel.....1877
Eufaula—Peter Bryce.....1878
Selma—Robert Dickens Webb.....1879
Huntsville—Edmund Pendleton Gaines.....1880
Montgomery—William Henry Anderson.....1881
Mobile—John Brown Gaston.....1882
Birmingham—Clifford Daniel Parke.....1883
Selma—Mortimer Harvey Jordan.....1884
Greenville—Benjamin Hogan Riggs.....1885
Anniston—Francis Marion Peterson.....1886
Tuscaloosa—Samuel Dibble Seelye.....1887
Montgomery—Edward Henry Sholl.....1888
Mobile—Milton Columbus Baldridge.....1889
Birmingham—Charles Higgs Franklin.....1890
Huntsville—William Henry Sanders.....1891
Montgomery—Benjamin James Baldwin.....1892
Selma—James Thomas Searcy.....1893
Birmingham—Thaddeus Lindley Robertson.....1894
Mobile—Richard Matthew Fletcher.....1895
Montgomery—William Henry Johnston.....1896
Selma—Barckley Wallace Toole.....1897
Birmingham—Luther Leonidas Hill.....1898
Mobile—Henry Altamont Moody.....1899
Montgomery—John Clark LeGrand.....1900

THE SCHEDULE OF THE ANNUAL ORATORS.

Gaston, John Brown—Mobile session.....1869
Ketchum, George Augustus—Montgomery session.....1870
Anderson, William Henry—Mobile session.....1871
Weatherly, Job Sobieski—Montgomery session.....1872
Jordan, Mortimer Harvey—Tuscaloosa session.....1873
Seelye, Samuel Dibble—Selma session.....1874
Ketchum, George Augustus—Montgomery session.....1875
Michel, Richard Frazer—Mobile session.....1876
Fournier, Edmund Henry—Birmingham session.....1877
Riggs, Benjamin Hogan—Eufaula session.....1878
Mitchell, William Augustus—Selma session.....1879
Baker, Paul DeLacy—Huntsville session.....1880
Baldridge, Milton Columbus—Montgomery session.....1881
Bryce, Peter—Mobile session.....1882
Sholl, Edward Henry—Birmingham session.....1883
Sanders, William Henry—Selma session.....1884
Searcy, James Thomas—Greenville session.....1885
No oration delivered—Anniston session.....1886
Huger, Richard Proctor—Tuscaloosa session.....1887
Baldwin, Benjamin James—Montgomery session.....1888
Coleman, Ruffin—Mobile session.....1889
Inge, Henry Tutwiler—Birmingham session.....1890
Riggs, Edward Powell—Huntsville session.....1891
Wyman, Benjamin Leon—Montgomery session.....1892
Andrews, Glenn—Selma session.....1893
Blake, Wyatt Heflin—Birmingham session.....1894
Cunningham, Russell McWhorter—Mobile session.....1895
Maréchal, Edwin Lesley—Montgomery session.....1896
Hill, Robert Sommerville—Selma session.....1897
Harper, William Wade—Birmingham session.....1898
Chapman, George Clarence—Mobile session.....1899
Goode, Rhett—Montgomery session.....1900

OBITUARY RECORD.

BARBOUR COUNTY—Alexander Turner, mc South Carolina 57. Paralysis.

CALHOUN COUNTY—William Worth Little, mc Vanderbilt 82, cb 82, Piedmont. Cause not not stated.

COOSA COUNTY—William Bailey, ng, age 78. Died February, 1900, of chronic diarrhœa.

CULLMAN COUNTY—W. A. McDonald, ng, cb 89, Baileyton. E. W. Terrell, mc Nashville 88, cb Elmore 89, Cullman. Elbert Hays, mc univ Grant 92, cb 92, Cullman, No date or cause of death given.

DALLAS COUNTY—Benjamin Clarence Adams, mc Alabama 72, cb 78, Safford. Cancer of stomach.

ELMORE COUNTY—George Bernard Judkins, mc Jefferson 59, cb Macon 79, Wetumpka. Bright's disease.

HALE COUNTY—David James Castleman, mc Tulane 96, cb 96, Greensboro, December 10th, 1899. Septicaemia. James Adams Tidmore, mc univ Kansas City 84, cb 98. Died at Havana, Jan. 23d, 1900, of erysipelas.

LAWRENCE COUNTY—John Swan Houston, mc univ Louisville 68, cb 87. Died at Moulton, Dec. 28th, 1899. Cause not stated.

LEE COUNTY—Henry Harrison Johnson. Died at Loachapoka. Date and cause of death not given.

LOWNDES COUNTY—Daniel Stiles Hopping, mc Jefferson 52, cb 78. Died at Letohatchie. Date and cause of death not given.

MADISON COUNTY—James Thomas Johnson, mc univ Maryland 48, cb 88. Died at Huntsville of apoplexy. John Marion Layman, mc Nashville 70, cb 87. Died at Maysville of pneumonia.

MARENGO COUNTY—Thomas Jefferson Bettis, mc Louisville 61, cb 84. Died July 20, 1899, at Nicholsville, of typhoid fever. William Fletcher Drummond, mc Maryland 47, cb 72. Died March,

1900, at Dayton. James Armistead Abrahams, mc Alabama 92, cb 92. Died at Demopolis, March, 1900, of phthisis pulmonalis.

MOBILE COUNTY—William Jones Lea, mc Alabama 86, cb 86. Died at Mobile. Allen L. Strong, (col), mc Howard 85, cb Dallas 85. Died at Mobile. Date and cause of death not given.

RANDOLPH COUNTY—James Clegg, mc Georgia Reform 49, cb 89. Died at Almond, June 24th, 1899, of cystitis. Anderson Welcome Duke, mc Graffenburg 49, cb 79. Died at Graham, August 4th, 1899, of apoplexy.

ST. CLAIR COUNTY—Richard Proctor Evans, old law, cb 79, Coal City. Date and cause of death not given.

SUMTER COUNTY—Darby Henagan, mc South Carolina 77, cb 78. Died at Epps, of heart disease. James Davis Henagan, mc Alabama 91, cb 91. Died at Epps, of pneumonia. Dates not given.

TUSCALOOSA COUNTY—D. C. Asher, mc —, cb 78. Died at Cottondale. William Washington Elrod, ng, cb 78. Died at Sipsey Turnpike. Willis Mackey, mc ——, cb Fayette 98. Died at Oregonia. Charles Richard McCord, ng, cb 80. Died at Oregonia. Dates and causes of death not given.

ERRATA.

PAGE 319, bottom line, "for" should read *far*.
" 365, fourteenth line from top, for "auxiliary" read *axillary*.
" 380, seventh line from top, for "prophylatic" read *prophylactic*.
" 385, second line from bottom, for first word in line read "*It*."
" 415, third line from bottom, for "exutdea" read *exudate*.
" 425, sixth line from bottom, for "dysnoea" read *dyspnœa*.
" 438, sixth line from bottom, for "eitology" read *etiology*.
" 440, seventeenth line from bottom, for "peneterated" read *penetrated*.
" 455, sixth line from bottom, for "sight" read *site*.
" 464, twelfth line from bottom, for "opposition" read *apposition*.
" 486, tenth line from bottom, for "pacient" read *patient*.
" 488, omit last line.
" 497, seventh line from top, for "that" read *than*.
" 501, eighteenth line from top, for "examination" read *examinations*.
" 502, sixth line from top, for "muccous" read *mucous*.
" 512, tenth line from bottom, for "idoine" read *iodine*.
" 515, ninth line from top, for "appilcation" read *application*, and for "dresings" read *dressings*.
" 553, omit first paragraph. It is duplicated below.
" 554, eleventh line from top, for "primiparea" read *primiparæ*, and for, "multiparea" read *multiparæ*.

THE APPENDIX

OF THE

Medical and Sanitary Dissertations

AND REPORTS.

THE ANNUAL ORATION.

By Rhett Goode, M. D., Mobile.

Grand Senior Counsellor of the Medical Association of the State of Alabama.

Mr. President, Gentlemen of the Medical Association of Alabama, Ladies and Gentlemen:

The honor of addressing you this evening has fallen to my lot much to my embarrassment for the reason that I fear what I may have to say will not approach a realization of the expectations you may have formed, of what should come from one who occupies the position of annual orator of the Medical Association of Alabama. The past meetings of this society have been made brilliant by the addresses of its members, and the memory of their eloquence, and the wisdom of their discourses, have set a standard to which I can hardly hope to attain.

Then, too, it is difficult for me to express the feelings of gratitude that are aroused by the warm hospitality which has been extended to this association as a whole, and to each of its members in particular, by the people

of Montgomery. This marked hospitality, however, is but one of the forms of the expression of the character of its people, who have taken keen delight in adding to the natural beauties around them, those that are to be had in architecture, as is evidenced by the elegance of their buildings, which are in perfect accord with the grandeur of the site of the city.

During my last sojourn here I have been repeatedly reminded of a remark of Heinrich Heine, the wonderful German critic and composer of beautiful, fantastic poetry and prose, in which he said of the people of Italy in his "Florentine Nights," that the women were more beautiful than of old, and he attributed the increase of beauty to two things: one was the ancient statues of the Greeks and the works of the latest sculptors and painters which had set a standard toward which the people had unconsciously aimed and to which they had at last approached. The second cause of the increase of beauty lay in the effect of climate and the close association of the people with the majesty and grandeur around them as evidenced in their mountains and valleys and plains.

Those things which Heine said of the people of Italy may as truthfully be said of the people of Alabama as typified in the City of Montgomery, only here there is another and very powerful force to which Italy can not look back. Here are the natural beauties which soften character and which show one the masterful, poetic work of the All Powerful Creator; here, too, one has the balmy, perfume-laden breezes as in Italy, a pure atmosphere and idyllic surroundings; but here we have what Italy has not, and that is the environment wherein we are made to live and inspire the memories of the old past which has a halo of tenderness and simplicity such as the past of Italy has not, and yet from here one may

look at the glorious present and a future full of the finer realizations of an age of progress. These things, the old with its glamor of poetry, and the new full of the luscious wine of a quick, active life and a firm, well-founded hope one finds here, and all this is borne in the lovely faces of those who are the true bearers of the guerdon of beauty. But it is not alone beauty and sweet memories which are the sign of this city of sunshine and happiness, for here one finds the best type of the new city of the new South which is made possible by the high and progressive character of its citizens and its geographical position. At the opening of your magnificent union depot two years ago, it was said of your city by my distinguished friend, Mr. E. L. Russell: "A glance at the map of Alabama will show to the most casual observer that the city of Montgomery is like the hub of a wheel from which radiates the Alabama river with its connecting waterways and eight lines of railway directly connecting it not only with all parts of the State of Alabama, but equally as effectively with the entire railroad system of the United States."

Montgomery is more to us, however, than a mere capital. It is the center of the wisdom of our State; it is the center of trade, a city of homes, a seat of prosperity and a place whence radiates intelligence, learning, just laws, civic pride and judicial decisions which more firmly establish the confidence of mankind in the justice and incorruptibility of the courts of this great republic.

It is in such a place as this that our Association has met in this last session of this century, and it is now that we who are here are to close the records. Upon me has fallen a part of this duty, and it is because of these things and the surroundings that I am more keenly sensible of the duty which has fallen upon me. If, then, what I may have to say should prove of interest, I shall

have almost accomplished my hope; should it prove to be of value it will be what I have feared it would not be; if it should be the cause of one step in advance, I shall have almost done my duty; but I am without great hope that my words will accomplish much.

Association among men is as the association of ideas. Each man is a source of stimulation to all other men. The incentive to endeavor in practical lines is lacking in the hermit. A Newton might work out his Principia in seclusion, a Spinoza might evolve a complete philosophy as he worked at grinding lenses; but men who have to do directly with the welfare of others and the happiness and prosperity of whole communities need the association of others in order that the real needs may be kept in the forefront and dealt with from all just standpoints. It is on this that the great value of an association depends. It stimulates thought, concentrates it in right channels, focusses endeavor upon the needs of the hour and thus brings to bear for the solution of problems the whole strength of mind, not of one man only, but of many. Among the problems which confront us as an association to which the State has delegated very general powers to be wielded for good or for evil in the conservation of the commonwealth, there is to-day none which is of more vital importance than that of quarantine. It is a problem which we have had to face in the past and a problem we shall have to face in the future. It is one which is almost omnipresent in some form. It is because of the importance of the subject and that the rules of this association provide that the annual orator shall in his oration discuss some question connected with medicine or the preservation of the public health that I have selected as the title of my discourse

QUARANTINE—MARITIME AND LAND.

There is nothing that has a wider bearing and at the same time a more beneficent and a more baneful effect than quarantine. The very word inspires fear, and the yellow flag makes one shrink with terror. In the word lurks the fear of contagion, subtly dealt disease or death, and at the very least one shrinks from the warning of disease and sign of seclusion, because of the fear of days of genuine discomfort under direct surveillance, a prisoner. This is the nightmare of quarantine.

On the other side are those who enforce the quarantine and they are generally almost as terror stricken and are often the greater sufferers. It is they who go to any lengths in shutting out disease. It is they who give to quarantine its commercial terrors and who lay upon business the paralyzing hand and that too, only too often regardless of right or wrong, of loss or gain, and many times in absolute ignorance of the uselessness of their acts and the unreasonableness of their fears.

The men of this association, as well as the great body of medical men throughout the United States, are using every endeavor, every reasonable precaution to prevent the spread of contagious and infectious diseases and do so with the most salutary results. So nearly perfect is their work that the strict, disastrous "shotgun" quarantine cordons have had their day and should cease, as t' ey have been supplanted as far as their usefulness is concerned, by the rational, scientific, systematic quarantine which is almost absolutely efficient and far less of a menace to prosperity and progress.

The right of quarantine is a right that is incontestible. It is founded upon the right of man or a number of men, of a society, a city, a State or a nation to protect himself or itself from exposure to the infectious

or contagious diseases which carry with them the effects of disability or death. The limitations of the right or the limitations of the stringency of the execution of the quarantine, depend upon the rights of those excluded or those upon whom the quarantine operates. If the one against whom the quarantine operates is able to prove that it should not apply against him, then the quarantine has no right to exist against him. The same is true of a city, for if the disease against which quarantine orders have issued has been falsely represented as a sufficient cause for quarantine orders to issue, or it may be proved that the disease is under good and efficient quarantine within the boundaries necessary to confine the contagion, then, further quarantine has no right to be. But in any and all events quarantine has a right to be where the health and lives of people are endangered, and there it has a right to be as rigorous as necessary for the protection of the people, even though it may cause undesirable and even destructive results.

But wherever it is possible to mitigate the undesirable results it should and must be done.

In other words, quarantine has a right to exist, but no right of quarantine carries with it the right to do anything else than conserve health. Whatever else it does is outside its domain. These principles being incontestible, the real problem becomes that of the proper application of quarantine. The first part of the question is that of what diseases are quarantinable; the second is, what manner of quarantine is necessary and justifiable; the third is, who shall have the right of conducting the quarantine that it may be efficient and at the same time within its right.

We of the South have to face many diseases which are infectious and contagious. We have not only those that are known to the colder latitudes, but also those

that are developed in the tropics. Among those common to all are smallpox, scarlet fever and diphtheria, and from the tropics we are liable to dengue and yellow fever. Against all of these quarantine orders have been issued and enforced. Smallpox, scarlet fever and diphtheria are now diseases against which the smaller and more easily enforced quarantine is imposed. They are all such as may be generally confined to the place of their origin, and a house quarantine is sufficient. That this is true of smallpox does not depend upon the nature of the disease but upon the general system of vaccination. This fact has also shorn the disease of the terrors which it once inspired, for now the number of victims that it claims per year is less than that of any other quarantinable contagious disease. A century ago this disease did more to limit the growth of the population of Europe than any one other thing, disastrous as war was. It has been calculated that one-third of the children then born fell victims of this disease which to-day has been shorn of its virulence and of its contagiousness through the wonderful work of Edward Jenner.

These three diseases are the principal ones which we meet commonly with in the North, though we might include typhus or ship fever, Asiatic cholera and the bubonic plague. The *one disease* which is uppermost in our quarantine work is a tropical disease, the very name of which is a source of terror. I need hardly say that it is yellow fever, and that it is especially in reference to it that I will direct my remarks hereafter, as it is toward it that almost all of our quarantine laws and regulations are leveled.

It may be described as an acute, infectious, specific, febrile disease of one paroxysm characterized by the suddeness and violence of its onset, the rapidity of its course, the gravity of its symptoms and, fortunately, by

its almost total lack of disagreeable or dangerous sequelae in the cases ending in recovery. However, in regard to the specific cause of the disease, though many claims have been made that the germ has been discovered, it has never been demonstrated beyond a doubt, as the bacillus of Sanarelli does not entirely fulfill the postulates of Koch. Yet, long ago the theory that the disease was of the same character as malaria and was of paludic origin, was abandoned as absolutely untenable. That the disease is of microbic origin there is no doubt. The germs propagate under favorable conditions, presumably in moist ground, in a climate where the temperature at no time falls below 50 degrees F. Thence it is spread to human beings who themselves become the means of communicating the disease to others. And here the popular opinion receives a rude shock, for it is evident from all cases treated, that yellow fever is not communicated directly from one person to another, but that first the one afflicted must infect his clothing or other fibrous matter, and that when this shall have become sufficiently saturated with germs it becomes the means of conveying the contagion.

In demonstration of this fact there is the record of the treatment of cases during the epidemic of 1897, in the yellow fever camp under the care of the Board of Health of the City of Mobile. There in open tents, by the use of the most careful antiseptic methods, fifty cases were treated and not one case of the disease in the City of Mobile or its environs could be traced to the yellow fever camp. The rule in treating all cases was to be almost lavish in the use of disinfectants; to disinfect all clothing every day; to disinfect the body, face, hands and hair of every patient as often as possible, and it was found by such methods the disease was absolutely prevented from gaining a foothold in any part of the camp

or of extending outside. During the same year, in the City of New Orleans, the Beauregard school building was used as a yellow fever hospital, as was also the Touro Infirmary and the Hotel Dieu, and in them hundreds of cases were treated, often by non-immune nurses, and many times fever patients laying side by side in the wards with non-immune surgical cases, and in no instance was the disease communicated from a fever patient to a nurse, or to a non-immune patient. Such facts, in the popular mind, are little short of miracles, though in truth they are but the result of modern antiseptic methods followed in the treatment of the disease, and the most absolute illustration of the fact that the disease is not communicable directly from one person to another, and that the disease is easily confined within a prescribed district. When the first case has been discovered it should be the rule to immediately separate that case from all other individuals, and by so doing it may be possible to prevent such spread of the disease as would make it epidemic.

In disinfection and quarantine of the first case lies the secret of the success of prevention of an epidemic.

Medical science and preventive medicine have made enormous strides during the last twenty years, so great in fact have they been that people have been unable to keep pace with them and they know little of what has been done for their protection and welfare. Yellow fever, though a scourge which has inspired terror and even now inspires it in the South as no other disease does, in reality does not merit one-tenth of the distinction it enjoys. Under the latter day treatment the mortality from the disease is less than that from influenza and not one-tenth that from diphtheria and scarlet fever, and in no degree does the death rate approach that from typhoid fever. Whether or not this is due to the treat-

ment of the disease or to the disease being of milder form is a matter of opinion, but we have no reason to believe that yellow fever, is anything else than yellow fever, though one thing seems certain, that its virulence increases the longer the epidemic runs.

However, it is this disease which is principally the cause of the extreme quarantine measures which are at times enforced, and which cause us to-day the most intense anxiety. As regards quarantine, there is an old part of the record which is not bright, though that of the past few years has been, in a great measure, all that could be hoped for. In the past it was the best that could be devised, based upon the knowledge of the disease, but until recent years it has been inefficient, generally because the proper methods of initial quarantine were not practiced.

The great and efficient work in protecting the people of the United States from this disease lies primarily with foreign countries and islands, for the disease has no permanent foothold in the United States. The greatest source of infection has in the past been the Island of Cuba and the port of Havana, in fact, it may be said that thence the disease has been imported in more than fifty per cent. of the epidemics in the United States.

Our own government appreciates this in the truest sense of the word. Through the accident of war we have come into control of that terribly pestilential island and port, and the first work that was done after we came into power was that of sanitation, under the direction of the Marine Hospital Service. The result of that work upon the City of Havana has been almost greater than could have been expected, for not alone has the port been put in fair sanitary condition, but rules have been inaugurated and enforced for the disinfection of all shipping entering and leaving that port.

All vessels leaving Havana for the United States, or for other ports in Cuba, are inspected by medical officers who give or deny the bill of health according to whether or not there is every indication of compliance with the regulations. As the Southern States have different regulations governing non-immunes to yellow fever, the Marine Hospital Service while carrying out its own regulations, tries to co-operate with the various State Boards of Health. There is at the Havana office a record of immunes. All baggage for the United States is inspected and disinfected by this service. The disinfection of vessels destined for the United States is done during the quarantine period by the barge "Protector," which is furnished with a complete fumigating plant. Upon the completion of the disinfection the vessel is given a clean bill of health and allowed to proceed, and she makes up her detention time upon the voyage. For instance, a vessel arriving at her destination three days out of Havana would need to undergo but two days' of detention after reaching the port of arrival, whereas had she gone without disinfection she would have been detained five days after her disinfection. All ballast and other matter is disinfected at Havana, and when a vessel arrives at a port of the United States every necessary requirement aside from complete compliance with detention time is completed, and there is every reason to believe that such a ship may, with almost absolute safety, enter any port of the United States.

If all vessels destined to our shores from tropical ports were treated in accordance with these rules there would be nothing for us to fear, but unfortunately such is not the case, and many of the vessels that come are from ports where but lax quarantine is enforced. It is toward these that the Marine Hospital Service has to be the most on the alert and toward which the Mobile Bay regulations are now mostly enforced.

The Mobile Bay Quarantine Station is located thirty miles south of Mobile, only a stone's throw from the Gulf of Mexico. This station is operated by the Quarantine Board of Mobile Bay. Since the Board took in hand the maritime quarantine of Mobile Bay not a single case of yellow fever has passed the limits of the station, though many cases have been brought there from Mexican, Central American and South American ports. As far as yellow fever is concerned, this is a record possessed by no other State quarantine on the Gulf or South Atlantic coasts, and it is questionable if any of the national stations can show such a record; and in proof of this statement it is only necessary to glance back at the history of the past epidemics in the South and note the controversies that have arisen over the points of entry, now here, now there, but in none of them has the name of the Mobile Station even been mentioned.

For the year ending March 31, 1900, over nine hundred vessels were boarded and inspected by the Mobile Bay quarantine physician, nearly fifty per cent. of which were from Latin-American ports. The routine of the work runs thus:

Upon approaching the quarantine station the vessel is compelled to hoist a yellow flag at the foremast, thereby signifying that she is in quarantine and is to be boarded by no one until she has been inspected and pratiqued (given a bill of health) by the quarantine officer in charge. When the vessel is from a non-quarantinable port the officer has merely to see that the number of persons on board tallies with the consular bill of health, and if not, he finds out why not; whether it is due to death, drowning or other cause.

During the active quarantine season, that is, from the first of April to the first of December, all ports south

of the United States are considered to be suspected and, to facilitate the demands of commerce and at the same time to fully guard against the introduction of infectious and contagious diseases, these ports are divided into three classes: First, ports known to be infected; second, ports not known to be infected, but from their proximity to infected ports considered to be suspected; third, the fruit ports around which especial safeguards are thrown, as will be explained later.

Vessels from infected ports with a record of infection on board either at the port of departure or during the voyage, are not permitted to enter Mobile Bay, but are spoken by the pilots in the Gulf of Mexico and are ordered to the Marine Hospital Station at Ship Island, sixty miles west of Mobile Bay and twelve miles from the Mississippi coast.

Vessels arriving from infected ports with no history of infection on board are inspected at anchor, temperature and pulse of each member of the crew being taken, and if any suspicious symptoms are noted she is held under observation, and if quarantinable disease develops, is ordered to the government station at Ship Island. If otherwise she is ordered alongside the fumigating plant for discharge of ballast, if she has any, and disinfected. This fumigating plant is erected upon piling about one-quarter of a mile distant from the quarantine station and with no shore communication.

After the discharge of ballast the hold is washed with salt water and then with a 1-800 solution of bi-chloride of mercury under pressure which reaches every crack and cranny of the ship's hold. All personal effects and bedding are placed in a steam chamber and subjected to a temperature of 220 degrees F. for thirty minutes, and the hold and living quarters disinfected with sulphur dioxide generated in a specially constructed furnace and

forced into the vessel under high pressure by a Sturtevant fan. So powerful and searching are these fumes that every form of animal life is destroyed. After disinfection the vessel is anchored within the quarantine anchorage and no communication permitted with other vessels or with the shore until the expiration of the full quarantine limit of five days. Then if all is well the vessel is permitted to proceed to her destination. In the meantime, however, the quarantine physician makes a daily inspection of all hands.

Vessels arriving from ports of the second class undergo the same restrictions with the exception that the days of quarantine are three instead of five.

The Central American fruit ports comprise those under the third classification. In order to facilitate commerce in that perishable commodity, fruit, the Marine Hospital Service sends immune medical inspectors to those ports, their period of service being the closed season. Their duties are to inspect all vessels leaving for the United States and to keep a close watch on the fruit vessels while in port, permitting only the minimum amount of communication with the shore, and on the departure of the ship to give a bill of health if all is found to be well upon an inspection of the crew before departure. Without the bill of health the vessel would be subjected to the same restrictions as any other vessel from a suspected port. With this bill of health and conditions satisfactory upon arrival in this country after an inspection of the crew and passengers at the quarantine station, pratique is given. All passengers from these ports are required to be under direct daily supervision of the health officer for ten days prior to their intended departure for the United States.

With the great increase of traffic between Mobile and the Latin-American ports, especially with the Cuban

ports, several of which are practically never free from yellow fever, the post of quarantine physician is by no means an easy one, but is one of great responsibility.

It need hardly be said that this quarantine is effective. As stated, not one case of yellow fever has ever yet run that gauntlet. Moreover, this is the true manner in which to conduct quarantine, and as far as the circumstances will permit, it is the kind that *should* and *must* be put into force on the land when occasion demands.

Conditions on land are, however, far different from those on sea. It is comparatively easy to apprehend those who communicate by means of water, but where the opportunities of communication are as numerous as the paths of the forest, it is very difficult to supervise them. The consequence of this is that land quarantine calls for a greater degree of vigilance and demands a multiplicity of minor details, provisions for every possible loophole and the utmost care that it shall be exacting and at the same time with the least amount of burden.

The first duty of those to whom the prevention of the spread of the disease is intrusted is to prevent its introduction, and in order that this may be accomplished it is necessary for all Gulf and Atlantic ports to maintain that system of quarantine which has proved to be the most effiective, and in this matter it is with the greatest pleasure that I state that there is none which has been more successful than that which has been put into force at Fort Morgan under the advice and direction of Dr. T. S. Scales, Health and Executive Officer of the Mobile Bay Quarantine Board. It is a crown of glory greater than the people of this State know, and it is a monument which will be some day appreciated in its proper degree. No city and no State has any manner of right to authorize and maintain any form of quarantine

of its sea coast which will be any less effective than that maintained at Fort Morgan.

Yellow fever has not always gained entrance at the larger ports. The landing of persons who may be liable to suspicion is there generally prevented. Without criticism, it may be said that the disease has on several occasions gained admission through the minor ports where no quarantine was maintained. Such places should be under as strict quarantine as the larger ports, and, in reality, they should be watched with greater vigilance. They are now always open to suspicion and are the only truly weak part of the exclusive coast quarantine. Once fever has appeared at such a point, prevention of further infection depends upon the immediate recognition of the case, isolation of the patient, disinfection of all fomites and observational quarantine of all who may come in contact with the patient. This would effectually stamp out the disease at its very inception.

When a primary case develops in a city such measures are possible to a greater degree than in the country, for all diseases having any resemblance to yellow fever are at once reported to the health officer that a correct diagnosis may be made, and pending the diagnosis the patient is placed in quarantine and the same precautions observed as though he were affected with the fever. This provides the protection that is reasonably demanded by the people. Once the disease is diagnosed as yellow fever there is no use attempting to conceal it—in truth, it were not only useless but it would be criminal as well. The truth will out, and as soon as it is out, if the authorities have denied its existence, the people will have lost faith in those to whom the protective work has been assigned. It is then the time to tell the truth, the whole truth and nothing but the truth.

People must be kept out of the infected neighborhood and those who may have been in it and who are subject to suspicion should be placed under observational quarantine, and all people should be kept informed of the condition as far as the public health is concerned. Then, too, every case which develops should be reported and published if it should be outside the quarantine limits, which will not be probable, and should be dealt with as a separate case and have its own quarantine.

The old form of quarantine was that of quarantining against a disease, and should be termed Exclusive Quarantine. The modern, scientific quarantine may properly be termed Inclusive. The one kind seeks to exclude the disease, the other seeks to confine it. The last is the rational quarantine, and is the only kind that has a right to exist, for if those upon whom the burden of enforcing it rests are true to their trust there is no reason why the disease should ever spread beyond the confines of their power. Yet health officers are but human. They have eyes that see but in the light, reason which acts only upon that which they know and physical powers but little, if any, greater than those of other men. Deceit and fraud may succeed in defeating their honest aims, and therefore the Inclusive quarantine should be extended and safeguarded in every way possible and reasonable.

This has been the policy pursued in the City and county of Mobile, and inaugurated and enforced by the railroads running through and terminating in the City of Mobile. I can do no better than quote from a very able, honest, practical, reasonable paper prepared by President Russell, of the Mobile & Ohio Railroad, in which he concisely states the case relative to railroads. He says:

"The wise management of a railroad looking to the

protection of the property confided to its care and looking to the promotion of the business of the road, will use every endeavor to secure the confidence of its patrons by adopting the best known safeguards to prevent an introduction of the fever along its line. The policy of a railroad should be to do all the business possible consistent with the safety of the communities through which it passes. With this purpose in view the management should map out a definite course and take into its confidence the boards of health and the people behind them, concealing nothing and frankly submit its proposed action for approval.

"When it was declared that yellow fever existed in Mobile in 1897, the relay system was inaugurated. I will briefly explain the working of the system: A train leaving Mobile was handled by a crew at least a quarter of a mile beyond the first relay camp. Then a crew located at another relay camp at least a quarter of a mile north of the point where the train was left, would come forward and take charge of the train. It was arranged that if the fever should extend up the line these relay camps should be located at a point beyond the place of infection. The crews were never allowed to come in contact, passenger travel was practically abandoned and the freight business was continued without any danger appreciable to the communities north of Mobile. The cities and towns along the line of the railroad were promptly notified of the measures that had been adopted for their protection. Nothing was concealed from any of the communities. The agents were instructed to keep the people informed. This caused the confidence of the people in the management of the Mobile and Ohio Railroad Company to strengthen daily and grow during the entire epidemic, and it affords me great pleasure to state that there was not a single city,

town or community on the line of this railroad that refused at any time during the epidemic to give the management its entire confidence and most active co-operation.

"I can state as another result of the working of this system, that the Mobile and Ohio Railroad Company's trains ran into and out of Mobile during the months of September, October and November, 1897, under the safeguards adopted and without transporting the germs of a single case of fever to any community on its line."

The value of a relay system may be shown by other testimony than that of President Russell. One instance will suffice. Last year yellow fever was present in the City of New Orleans and a relay station was inaugurated at Scranton, Miss., in order to confine the disease between Scranton and New Orleans. The result was greater than was expected, for at Scranton several cases of fever were apprehended and turned back. These cases would otherwise have come into Mobile. This is of itself sufficient argument for the justice of the establishment of such camps.

Time will not permit of the discussion of the minor and technical points of quarantine. Suffice it to say that they take recognition of every possible means of the contagion spreading and are such as to efficiently prevent it.

The question now arises as to who should have the right of quarantine and who are competent to exercise that right.

One thing is certain, no one should have any power in the matter who is not conversant with the needs of the hour, or who lacks the character necessary to maintain the quarantine as demanded.

That is, the quarantine should be under the care of competent and trustworthy physicians. Once they have

discovered what is necessary, then the execution of their recommendations should be given as far as possible into the hands of the civil authorities. This is exactly what is done in this State where the State Board of Health and County Boards of Health have the right to recommend that quarantine restrictions be imposed, and upon such recommendations the Governor of the State, or the County and City authorities issue the quarantine proclamation. It is then carried out by special agents paid by the State in some instances and by the County and City in others.

This method has been found to be satisfactory as far as the efficiency of the quarantine is concerned, but there is unfortunately more demanded than the mere inclusion of the disease. Not only must this be done in such a way that the people who are outside the quarantine limits may be assured that it is done, but in order that they may be prevented inaugurating the terribly disastrous "shotgun" quarantine which, in the past, has done more damage than the epidemic itself.

Of all the organized bodies of men in the United States there is none that stands higher in this regard than the Marine Hospital Service. It has, by a long history of faithfulness and integrity, merited every bit of the confidence it has gained. It has the character of fearlessness, honesty and scientific accuracy. The very fact that this service is near the scene of an epidemic inspires confidence that it will be under control. This is not because this service does its work more thoroughly than any one of a hundred other organizations, but from the fact that it is more generally known to do its work thoroughly. If this service declares that an epidemic is under control the people will believe it, if any of its representatives declare that a person is immune there is no questioning it, if their stamp of disinfection

is on a parcel or box then all know that it is disinfected. A certificate issued by that service is certain of being respected though there is no show of power back of it. From this it is evident that the proper authorities to handle a quarantine, once it is established, is the Marine Hospital Service, acting in conjunction with the State, County and City authorities. This is the way in which our quarantine was handled last season. It was commenced by the city, afterward taken in charge by the State and then turned over by the State to the Marine Hospital Service for economical reasons. In assuming the management the Marine Service acted in harmony and strictly in accordance with the requirements of the State and County Boards of Health. The result was that there never was any question of the thoroughness of the quarantine. I am convinced that there is no system that will attain the ends of quarantine in a more satisfactory manner and at the least possible expense to the people in both anxiety and interference with commerce.

Shall we then have this kind of quarantine not only in our own State, but shall we advocate its extension and adoption elsewhere? It has shown itself to be competent and just. It has done what no other kind of quarantine has done and that is to disarm the "shotgun" quarantine. The people will acknowledge that strict, inclusive quarantine is sufficient for their protection, but they will admit it only when they are convinced that it is executed by those who have their interest as well as the interests of others at heart.

The colossus of commercialism has, in a measure, blunted the conscience of mankind, though each is himself a part of the body politic. The rights of the masses have so often been trodden under foot that there has grown up a feeling that there is no justice and protec-

tion without the sword and the gun. They and the corporation which have overriden their rights seem not to realize that their welfare is bound each to each with indissoluble bands. When they shall appreciate this then there will be an advance in the welfare and interests of both, and not till then.

There is, however, one body of men who have not fallen under the ban of commercialism and that is the great, universal body of which the members of this Association are a part. It is they who stand close to the people and are as a shield between them and death. It is they who know the people as no others do. They watch over them and know them as they are—they know the very secrets of their souls. They guard them. They care as well for the unfortunate, disinherited, vanquished, shoeless, vagabond, famished and despairing, as for those who wear the purple and dictate that the outcast shall be cast out. They are as well at the mournful beginning of life upon the straw pallet as at the joyous and triumphal welcome of the babes of princes. They know the sorrows of sickness and the woes that fall as well upon the rich as upon the poor, and they watch with hearts that weep in mounrful sympathy with those who cry in agony at the passage of souls from the cots of wretchedness and the beds of down. To all they have sacrificed their gold and their lives that all might be protected from subtle poisons and devastating diseases.

In the beginning they were hunted like Vesalius, who was exiled because he studied anatomy. They have been hunted like Rabelias; have been accused of blasphemy as was Harvey; have had their beneficent work derided, maligned, cursed, like Jenner; but they have pursued their way that mankind might be made happy. They have given their blood, which is more than

their gold, and their thought, which is more than their blood, and their love, which is more than their thought. They have given to mankind all that they possess, but the right to protect it.

They receive the complaints of the people against Fate and place the hand that gives hope upon the fevered brow. They hear confessions of wrong and bury them. They hear the accusations of others and counsel justice. They give their ears, their hands, their arms, their hearts, their heads. They do everything for mankind except evil. It is their right, their power, their duty, to warn the people and instruct them. Theirs is the duty to teach justice and be themselves the example. They have whispered the gospel of truth into the ears of mankind and have by their deeds taught it, to study virtue, probity, generosity, mercy. Their works of guidance and of warning have not only been printed, but have been spread broadcast. They have been attentive, vigilant, kind, faithful, humble, valiant. They have as fearlessly gone among insidious foes and as dauntlessly faced death for mankind as have those who have stormed breastworks and fallen in battle. They are the guards of the people of whom the people know not. To protect is the first duty, to teach the doctrine of that protection is the second. They have advanced from Hippocrates and Galen, to Lister and Jenner. They have taught the doctrines of Virchow and Pasteur, and have done the work of Koch and hundreds of others. They have spread their outposts against disease to the uttermost corners of the earth and in ceaseless vigils watch for the birth of Pestilence only to poison it and destroy its power.

They are ever at command and are ever there in the form of light. They throttle disease with subtile force, they study it that its points of vulnerability may be

known. They thrust insidious lances into the mail coat of Death. They progress by unseen means and walk in unknown ways. At times they emerge from their seclusion and add new radiance to the light that falls upon the ways of mankind. Their work is the azure. It is the light from above that blesses what it touches. They began their work in the night and as the Sun and Love brought forth the Dawn, so have they done, and have wedded the Dawn to all Humanity and are now creating the high noon—that high noon when disease will be within their power, when with the strength of Hercules, the wisdom of Prometheus, they will strangle the Hydra and free mankind.

Until that day comes they must be ever at hand. Not men, but things, are tyrants. The true source of danger is the frontier—watch it. The source of despair is the beaten track of quarantine—correct it. To correct it is the gospel of right, the gospel of progress, and it must be taught and taught now. Let all men teach it.

THE MONITOR'S ADDRESS.

By George Tilghman McWhorter, M. D., Riverton.

Member of the Medical Association of the State of Alabama.

Mr. President, Gentlemen of the Association, Ladies and Gentlemen:

In terms temperate and measured to speak words of wisdom to the wise, of instruction to the skillful, of caution to the prudent, and of courage to the brave and strong; such is the task assigned to the *Monitor* of the Medical Association of the State of Alabama.

That most men fail who essay the task goes without saying. Few men are so equipped, intellectually and professionally, as to address the members of this Association on terms of equality, who then may venture to assume the magisterial tone and address them as a *monitor?* It is true we had once a great and honored member, distinguished by vast learning, large experience, and transcendant ability, who could with ease and grace address this association *in verba magistri,* and be listened to with deference and respect by all. But *Jerome Cochran is dead.* The voice of the great monitor is silent forever. Since his day no man may speak with the same authority and *prestige,* as few men could speak so weightily or so well.

The humblest member of your body may, however, when assigned a duty by your presiding officer, proceed to discharge it hopefully, assured of your sympathetic support in any honest effort he may make. I shall, therefore, for a brief period, endeavor to clothe myself

with the dignity that inheres in my office, and, scarcely hoping to avoid the commonplace, so common and so fatal to him who speaks in a routine manner upon a routine subject, will invite your attention to "The Duty of the Physician to Himself." In so doing I shall trust largely to the generosity and forbearance of this learned, tasty, and discriminating audience.

The first clause of Section 2, Article 1, of the Code of Ethics of the American Medical Association reads as follows: "There is no profession, from the members of which greater purity of character and a higher standard of moral excellence are required, than the medical; and to attain such eminence, is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he can not command their respect and confidence; and to both, because no scientific attainments can compensate for the want of correct moral principles."

I believe, Mr. President, that the consensus of medical opinion in Alabama indorses this proposition in its entirety, and that the medical profession, as a whole, endeavors to live up to this abstract statement of its principles with a thoroughness, and with a success, such as is rarely witnessed in the application of practice to profession in other walks of life. That such is the case is evidenced by the high moral standing of the medical profession in the State, a standing that is fully on a par with, if not superior to, its professional and scientific status.

That such a conclusion may be reached, and honestly reached, by one whose legitimate function is to examine, to criticise, and even to condemn, when condemnation is proper, is ground for sincere congratulation. I can only say to the struggling physician in town or country who has resisted the temptation to an unclean or immoral

life: "Well done, brave and true; you have gathered the laurels that shed the brightest lustre on our beloved profession; you have deserved most of your brethren and of society and, inasmuch as moral grandeur is superior to intellectual greatness, your names shall stand first in the roll of those who have "made and kept us great." To the discouraged or skeptical brother, who is disposed to look upon this immaculate purity of personal character as more fitted to the Utopian days of Arthur's Round Table than the demands of this utilitarian age, I would say: "*Sursum corda,*" cheer up faint heart, lose not faith in the power and potency of right and righteous living. A well-spent life is a grand object lesson. Witness the most striking example of this truth in the ranks of your own profession. This moral elevation of character is the most potent instrument in the hands of the medical profession of the State to-day. Without it, all the learning, the skill, and the devotion to duty, which dignify and elevate the profession, would be largely neutralized by the profound distrust which all men feel for moral obliquity. When you, in your lives and conduct, lower this moral tone, you betray the citadel of your profession, you put to shame the achievements of your proudest intellects, and are more derelict in your duty than if you were wanting in those intellectual qualifications and that professional skill without which you would not be permitted to practice medicine.

The concluding paragraph of the section of the code from which I have quoted declares that it is the duty of the physician to be temperate in all things, and assigns as a reason therefor that the practice of physic requires the unremitting exercise of a clear and vigorous understanding; that the physician should always be prepared for emergencies that may tax his energies to the utmost;

that the well-being, and even the life, of a fellow creature may depend upon the possession of a steady hand, a keen eye, and an unclouded head on the part of the medical attendant. That such is the case has been universally admitted, but that it is the clear duty of the physician to maintain, as fully as possible, this perfection of physical condition in order to meet the trying demands of his profession has not been so clearly recognized, or, at least, so fully acted upon. I say this condition should be maintained as fully *as possible*, because, as a brilliant and witty writer remarked, people who wish to be in the pink of condition ought to be very careful about choosing their grandfathers. But, the delicate task of selecting your ancestors having been completed, and the foundation of a constitution laid in accordance with the inexorable laws of heredity, it becomes the duty of the physician to maintain the standard of his health and physical *fitness* with the same care and attention that he gives to his moral duties and his professional studies. Has he done this? Is the physical average of Alabama doctors up to the average intellectual, moral, and scientific *status* of the profession in the State? Unfortunately this question can not be unhesitatingly answered in the affirmative. It is true that from a physical viewpoint there are many shining lights in the profession. There are a few individuals that might have been chosen by the classic sculptor as models for Apollo Belvidere, Hercules, or even Atlas. There are also quite a large number of doctors in the State who, in form and physique, would compare favorably with the average American citizen; but when this is said, it must be admitted that there remain a large number of disciples of Aesculapius whose bodily vigor and general physical "fitness" are by no means in keeping with the vigor and acuteness of their mental powers or their rare profes-

sional abilities. A somewhat irritating feature of the case is that these gentlemen do not seem conscious of any short-coming on their part. They may even pride themselves on knowing a little more than the balance of us, and are certainly oblivious to the fact that they are, in a sense, a reproach to the profession. They modestly consent to hold most of the offices, and largely to direct the affairs of the Association, as well as, to absorb and retain a very large share of public esteem and confidence, just as though they were physically impeccable. So perfect is their *aplomb* that they would probably not be abashed by the knowledge that a cattle dealer would classify them as "canners." Of such a one it might be said: "You Cassius hath a lean and hungry look, such men do think too much." Yet, if they think at all on this subject, their thoughts do not beget that meekness and humility of deportment which would seem to comport with their physical insignificance or general gauntness of appearance. "On the contrary, quite the reverse," as Mr. Mantalini would probably say.

Far be it from me to reproach a professional brother with a bodily infirmity or a vice of nutrition, but when there seems to be reasonable ground for the belief—a belief very firmly and persistently held by the laity—that doctors do not rigidly practice those dietetic and hygienic rules and precepts which they are so careful to inculate, these "lean and hungry brethren" become shining marks for admonition. Not only is their personal appearance against them, but their poise and self-sufficiency has a tendency to invite attack. It might be proper, as it would certainly be convenient, to make of them scapegoats to bear away to the wilderness the gastronomic sins of the entire profession, while those happier mortals who carry upon their persons the flesh-marks of a quiet conscience and a good digestion should

receive commendation and approval. Such a view and such a solution would simplify matters greatly, would fix responsibility, and relieve a worthy section of the profession from unmerited reproach. It would probably command the spontaneous indorsement of the well-fed contingent in the profession. To the high professional and social standing of these gentlemen is probably to some extent due the almost total disregard of their own health, shown by many physicians who have otherwise conscientiously discharged all the duties of their arduous profession. This neglect has also been induced to some extent, no doubt, by the views of certain writers who, during the past half century, have spoken in glowing terms of the superiority of mind over matter. By example and precept the public has been mis-educated on this subject. The result has been that people began to take a somewhat disparaging, and quite mistaken, view of bodily vigor. The clear eye, the ruddy cheek, and the elastic step, came to be looked upon as the proper thing for the college athlete, the base ball player, or the pugilist, while not in quite so good form in other spheres of life. On the contrary, "deep lines of thought" on the brow of the young professional man, or an "interesting pallor" on the cheek of a society lady, was more nearly the thing, and indicated clearly the domination of the mental over the merely physical. Some of our greatest writers have sinned grievously in this particular. Lord MacAulay, describing in sonorous sentences the retreat of the British army from the field of Neevwinden, before the advance of the French, says: "Perhaps the frailest body in either of these mighty hosts was the hunchbacked dwarf who directed the fiery onset of France or the asthmatic skeleton who covered the slow retreat of England." He further says that those splendid examples of physical manhood, Robert, the Bruce, and

Richard, the lion-hearted, were heroes of a dark age; and unworthy to be compared with the dwarf, Luxemberg, or the consumptive, William of Orange. It is no doubt true that the great master of English prose merely intended these sentences to commemorate the fact that the reign of brute force was over forever, and that genius and courage can triumph over obstacles apparently insuperable; yet, to the student who reads, how utterly insignificant do the strength of Richard, and the dexterity and endurance of Robert appear. In his generous enthusiasm for struggling genius he may even persuade himself that it is his duty to admire infirmity and to despise strength and vigor. In utter defiance of the adage, *mens sana in corpore sano,* he may come to look upon the former as the ensign of intellectual supremacy, and the latter as the emblem of mere animal dynamics. Now, when the student has reached this view, he is certainly somewhat "*overtrained.*"

Had my friend, Dr. Moody, the Oliver Wendell Holmes of Alabama medicine and literature, chosen to write upon this subject, he would have written differently, though probably not less eloquently. He would never have been guilty of this apotheosis of deformity and disease. He would have convinced his reader that it was genius and not tuberculosis that made William of Orange great, and courage and persistence, not deformity, that made Luxemberg successful.

Had Dr. Searcy chosen to cite a great historical incident in connection with disease he would probably have cited one in which the disease exerted the usual, ordinary, and always disastrous effects, which physicians are accustomed to observe. He would probably have called attention to the fact that Napoleon lost the battle of Waterloo in consequence of a colic; that the victor of Austerlitz lay for hours in mortal agony in his car-

riage, while the blundering Grouchy marched farther and farther away, and the imperial army was annihilated in attempting a series of frontal attacks; that, finally, when the poor sufferer, for such he was, mounted his horse and rode forward to rally his broken battalions, it was only to be swept away with the fragments of his army before the irresistible rush of the on-coming Prussians. The incident quoted would have been equally historic, and the moral far more wholesome.

Genius, gentlemen, may in rare cases triumph over disease, but the most transcendant genius may, and in the end must, fall before it. It is the condition of our poor humanity. The disaster that overtook the emperor at Waterloo has, upon an humbler field, overtaken many a practitioner of medicine who rose from a bed of sickness to encounter an enemy more cruel and inexorable than the Prussian, and failed to rescue interests, infinitely dearer to him, and to those who employed him, than either wealth, empire, or domain. In view of the tremendous interests involved, the conscientious physician will not fail in the duty of carefully guarding his own health, as well as looking after that of his patients. The Quixotic idea that it is the duty of the physician to sacrifice his health and destroy his professional efficiency in the interest of two or three exacting patients should not obtain. This is mere knight-errantry, and may be possibly overlooked in young and susceptible physicians under peculiar circumstances. Of course, I expect the voice of the monitor to be utterly disregarded when Cupid has drawn the bow.

Not only should an individual not monopolize what belongs to society, but the careful conservation of powers and energies to be intelligently expended for the public good is not selfishness, but enlightenment. To what extent we may be able to induce the public to share

this view with us, and to modify some of what may be termed its unreasonable demands, is quite another thing. I am not sanguine of any very early or very radical change in the manner in which the public treats the doctors, in the way of calls, for example. The call that should have been made at 9 A. M. will in many instances continue to be delayed until 9 P. M., when there is a distinct change for the worse on the part of the little sufferer, and when the physician, exhausted by twelve or fifteen hours of responsible and trying work, is really as little fitted for additional duties as the exhausted Highland brigade was fitted to assault the heights at Modder River. But he will answer the call as they obeyed the order. The anxious parent, glancing at the tired face of the medical attendant may, if the emergency is not too serious, venture the explanation: "Johnnie seemed worse and we sent for you" as covering his whole duty in the matter. If your patron belongs to that superior and supercilious class who seem to regard the "earth and the fullness thereof" as having been created for their exclusive benefit, you will do well not to expect even the token of sympathetic appreciation. Under such circumstances the physician will do his duty to the utmost of his ability, and in a great majority of instances his skill and care will prevail. No after-care and attention can, however, recall the opportunity that passed with the morning hours, and no effort of the will can make the midnight professional drudge, the strong, fresh, and alert attendant that might earlier have answered the call. In some cases he will retire beaten from the conflict, with the consciousness that he was not wholly to blame.

The knowledge, gentlemen, that emergencies will continue to arise, that calls unseasonable, if not unreasonable, will continue to be made, should enable you to

equip yourselves better to meet them. In short, you must stay well in order to succeed in the practice of medicine. George W. Cable declares that it is a religious duty on the part of a woman to look well. My opinion is that it is the duty of a physician to be well, and to stay well, in order that the public, which pays the bills, may enjoy the luxury of being sick and that he may have the privilege of attending them.

It will be observed that I have insisted very strenuously that the physician should stay well, but have indicated no means, have prescribed no regimen, by which he should obtain this most desirable result. This is not an oversight on my part. Any specific directions would be entirely supererogatory.

You, gentlemen, have merely to practice in your own cases those careful, explicit, and minute, directions as to wholesome diet, regular hours, regular sleep, etc., which you are accustomed to vouchsafe to your patients every day in the week, and the result will be instantaneous and marvellous. Fewer emergency calls will be missed; a richer pecuniary harvest will be reaped; the avoirdupois average of the faculty in the State will soar upward like the recent price of cotton, and when this Association is photographed at its annual meeting next year it may possibly be mistaken for a college of cardinals.

If we, gentlemen, can maintain our moral and physical health and soundness, we need have no fear that our professional skill and aptitude and our scientific development will fail to make steady and uninterrupted progress. The mental superstructure, brilliant and strong, must be built upon a sound moral and physical basis. We must learn not to "despise the day of small things," or to contemn the humbler virtues. "There be things which are little in this world, but they are exceeding wise." Of such are the small duties we owe to ourselves

and our fellow-men, which constitute the bulk of our every-day lives, and which are so potent in determining our success or failure on the broader arena of professional and public life. If our private lives are healthy, clean, and wholesome, there need be no fear that our professional lives will be strong and useful, if not brilliant.

In conclusion, gentlemen, let me remind you that the "fine flower of a blameless life" is the sweetest blossom that can be laid upon our caskets, far excelling in fragrance that of the widest professional success, or the most distinguished scientific achievement.

Let us strive to win this white flower, and to wear it, not alone that we may be trusted and honored of men, but that we may win the approval of our own consciences, unto which we should hearken as unto the voice of God.

HISTORIAN'S ADDRESS.

By Matthew Bunyan Cameron, M. D., Sumterville.

Senior Counsellor of the Medical Association of the State of Alabama.

Mr. President and Gentlemen of the Medical Association of the State of Alabama:

"Oh, why should the spirit of mortal be proud?
Like a swift fleeting meteor, a fast flying cloud,
A flash of the lightning, a break of the wave,
Man passeth from life, to rest in the grave.

" 'Tis the wink of an eye, the draught of a breath,
From the blossom of health, to the paleness of death,
From the gilded saloon, to the bier and the shroud,
Oh, why should the spirit of mortal be proud."

The warrior coming fresh from the field of victory is overwhelmed with the plaudits of an excited and grateful nation. The public press fans this flame of epidemic praise by recounting instances in his school-day and former life hitherto unnoticed. He is decorated and advanced by the law-making power of his government. Upon his brow is placed the coveted crown of a nation's admiration. Life to him is full of events that swell his expanding bosom, thrill his pulse, and electrify his brain.

A flash-light has suddenly made his being known to the world, and that world rises to elevate, honor, and revere that which it only observes outlined in the searchlight of conspicuous events. He sees extended unto him the great hand of public admiration, and hears

his praises sung by the lips of many nations. Life to him has been worth living. The statesman, clothed with all the habiliments of civil power, who has made the world ring with his logic and oratory, who has step by step advanced in a grateful peoples' confidence by devotion to their interests, by condemning that which is hurtful to the nation, and advocating measures and principles that promote the general welfare morally, socially, and financially; who places no limit to the extension of human liberty, and circumscribes no boundaries where human servitude can exist; who by diplomacy suppresses the greed of hurtful national ambitions, and lights the fires of intellectuality and civilization upon a people's altars hidden by the rank weeds of ignorance and fatalism; who uncovers all that is unwholesome and rotten in our body politic, and permits the purifying influence of public opinion to permeate its substrata—has fought a good fight. He has made governments feel his power and individuals acknowledge his supremacy. He has not labored in a vineyard where the wounds of the thorns prevent the enjoyment of the fruit, but there comes to him the full fruition of an ambitious hope. A nation showers upon him her jeweled gifts of civil and judicial power, and there beams from his eyes a deep satisfaction that time has given him an existence. There is no paucity to his exultation, there is no economy in his eulogies. He has labored in a field that is photographed to the world daily, with the blemishes obliterated and the beauties exaggerated, and he stands as the proud possessor of a world's homage, serene, satisfied. The mitered and surpliced clergyman, with the pulpit as a rostrum, gives vent to his eloquence in expounding the decalogue and proclaiming the doctrines of the lowly Nazarene, and has the world for his audience.

With a theme so full of hope, he dissipates the dark-

ness of despair, so festooned with love, he hushes the murmurs of hate, so bright with joy, he dries the tears of sorrow, and weaves a web of enchantment about his hearers that brings them suppliants at the chancel rail, to implore a King for mercy, who knows no revenge. He puts songs of praise upon lips that have uttered nothing but curses, brings tears to eyes that have always gleamed with anger, and makes virtue unfold her snowy blossoms where only the fungoids of vice and immorality have blackened human history. By the fervid influence of truth and righteousness stimulating every cell of cerebral matter, he grapples with the most powerful giants of evil, and succeeds in driving from our towns and cities intemperance and licentiousness. He stands as a beacon light guiding to a higher life the wayward footsteps of sin-tossed humanity, and the tears of the penitent, the shouts of the converted, the prayers of the justified, the throngs of the multitude proclaim unto him that the world sees his work and hears his message. There is ready for him a bishop's gown, or a cardinal's robe.

The doctor, rich in mental grain, garnered after years of laborious study from various fields, enters upon a professional life that has no competition for its vastness of employment, its sore disappointments, its humiliations, its smallness of remuneration, and its microscopic glow of fame and renown. No other profession has done so much for the world and gotten so little from the world.

Fighting the great contest against disease and physical degeneration, they are slowly and surely winning a victory that the world cannot help from seeing, but which it does not care to recognize.

Wherever scientific medicine gains foot-hold, it modi-

fies the plague, eradicates the epidemic, stays the grim reaper, death, and decrees that only twelve human lives shall pay the eternal penalty where formerly twenty were required. With self-sacrifice and high devotion to scientific research, and small pay, our members are standing as flaming swords on disease-stricken foreign shores, to prevent the infection of our own people, and to fight back a stream of degenerates that have been pouring into our country. They go into the uncultivated wilds of all lands, to study the most malignant forms of disease, to evolve and perfect the most effective remedies, and these they give out for the benefit of suffering humanity without any consideration of reward. They sow that others may reap, they cultivate that others may gather the increase, and neither clientele nor nation appreciates their services or rewards their labors. They work where grief and sorrow are known, where the cries of pain and anguish arise, and keep aloof all save ministering angels and the faithful doctor. No public eye penetrates that dread gloom and tells the world of the heroism found there.

With the same fidelity to his profession, he enters the hovel as well as the mansion, hears the first voice of the new-born, and soothes the last days of a departing patriarch. He often hears the whisperings of reproach and slander where there should be praise and gratitude. Is there one before me in this assembly that has not felt the sting of censure when he knows that the sweetest anthems of praise should be sung? Enduring all things, suffering without complaint many things, a victim to the frailty and foibles of the human heart, the doctor pursues his isolated journey, tranquil and undisturbed by the turbulent seas of passion that surge around him. General Lawton, the brave and distinguished soldier,

meets a soldier's death on the firing line in a far-off eastern isle. His decorations came to him through distinguished service and loyalty to his country. A nation is clothed in the garb of sorrow, and sheds tears over his bier. He sleeps in our national mausoleum,

> "While glory guards with solemn round
> the bivouac of the dead."

The gratitude of a nation is manifested by a princely sum being donated by individuals to his widow and children. He deserves all that his country bestowed upon him living and dead, and I would not decry any effort to nurture and care for his loved ones, or to make his fame eternal. All is as it should be with him. How is it with others? John Blair Gibbs, assistant surgeon, U. S. Navy, on that dark and gloomy Cuban night of June 12th, 1898, amid the boom of guns, and the whistling of shells, met his death in the jungles of Guantanamo, while giving aid to his wounded comrades. His death was no less that of a hero because his country mourns him not, and fame enshrouds him not in her winding sheet. A nation says no panegyrics over his tomb, and, for aught I know, his body rests in a land so distant that "No mother's tear can be shed upon his brow, no flower cast upon his grave."

He was a hero of the rear, where the public gaze never reached, to exalt and crystallize deeds of heroism that are not surpassed by the ranks.

So, it is a wise provision of our State Association that one of their number should be selected annually, as historian, to memorialize upon the pages of our Transactions, the life, the deeds, the attainments, and the achievements of any members of our College of Counsellors who have died during the past year. Write the

record with a glowing pen, and transcribe upon history's pages deeds too full of philanthropy, and a love for mankind too near akin to Deity for the oblivion of death to shut out from the knowledge of future generations.

My duty is nearly done, for, it is with much pleasure and satisfaction, and a recognition of the goodness of an all-wise God that I inform you that the grim reaper has not invaded our College of Counsellors during the past twelve months. They are all standing to-day as sentinels at every home in our beloved State, fighting the encroachments of disease and pestilence, and staying the pernicious influence of the new isms, emissaries of hell disguised in cloaks of righteousness—Osteopathist, Faith Curist, and Christian Scientist. Our Counsellors are the guard of honor to our State Association, and upon them, through their County Societies, falls the brunt of the battle in stemming this tide of error that is sweeping the neurotic and unwary off their feet. Humanity unceasingly reaches out for the mysterious and unfathomable, and though the draught be the gall of hell, or the spirits of despair, yet will they sip the repulsive fluid that condenses into death. Yours be the duty to beat back this avalanche of mysticisms by the power of the laws of this State, enacted through the influence of this Great Association. Will you be equal to your opportunity? Fanatics may rage, and hypocrites may denounce, but the temporal and physical welfare of two million people demand that you should act so as to demonstrate that mal-practice shall not be committed in this State under the cloak of religion.

Faithful to every trust, standing continually as a bulwark against the storms of quackery that have sought to get a foothold in our State, I know that you will

not shrink from this ordeal, but that you will bare your breast to the increasing tempest and fight back the foaming billows of deceit, until some future Historian shall have the sad study to chronicle your journey to mansions in the skies.

"If life were all, and death its certain end,
  If nothing lured the soul to higher aims,
If what we cherish here, and guard and tend,
  Were crown and summit of what life attains,
Reward so small, had scarce repaid the battle life sustains,
    If life were all.

"If life were all, and midst its wild alarms,
  Nor Cross, nor blood shown through the awful years,
If through the dark no outstretched loving arms,
  Beckoned the woful to forsake his fears;
O! cup of gall! Life were not worth the flood tide of its tears,
    If life were all."

ACUTE ANTERIOR POLIOMYELITIS.

By Eugene DuBose Bondurant, M. D., Mobile,
Senior Counsellor of the Medical Association of the State of Alabama.

In acute anterior poliomyelitis, the familiar infantile spinal paralysis, we have a disease meriting the attention of both the neurologist and the general practitioner of medicine. For the latter, the disease possesses probably the greater interest, since, in its earlier stages, it is most often seen and treated by the family physician, coming under the observation of the neurological specialist only at a later stage, and in its chronic form, when the hope of cure is comparatively small. The belief that a review of some of the practical aspects of the disease as met with in Alabama, together with a discussion of its nature, frequency, symptomatology, diagnosis, and treatment, may prove interesting and not unprofitable to the members of this association, has encouraged me in the preparation of this paper.

Anterior poliomyelitis, then, to which I ask your attention, is an acute, under some circumstances seemingly infectious, bacterial disease, presenting in its initial stages the clinical features of acute germ invasion, followed by atrophic paralysis of associated muscle groups in one or more extremities, these characteristic nervous symptoms being dependent upon pathological alterations in certain of the peripheral motor neurons, and in anatomically related structures of the anterior gray horns of the spinal cord.

Whether the degeneration in the motor nerve cells is the primary lesion, or is a secondary effect of inflammation in the extra nervous structures, is one of the undetermined problems in neuro-pathology, and one which, being of little practical importance, need not detain us here. Another point in the pathology of the disease, upon which investigators are not agreed, is, whether the micro-organisms causing poliomyelitis be specific, that is, produce poliomyelitis and nothing else, or, whether the affection is a result of the invasion of bacteria, which may under different circumstances incite other forms of disease. No specific germ has yet been isolated, and in the light of our present knowledge of the subject, my own opinion is that the latter view is more nearly correct. As bearing upon this point, a recent investigation into the etiology and pathology of poliomyelitis made by Auerbach, of Frankfurt, deserves mention: After a clinical study of fifteen cases of the disease, supplemented by examination of the cerebro-spinal fluid, withdrawn by lumbar puncture, Auerbach reaches the conclusion that the most frequent cause is the Weichselbaum-Jager meningo-coccus, and that the difference between cerebro-spinal meningitis, some forms of cerebritis, and acute anterior poliomyelitis is not one of pathogenesis, but of varying intensity and location of the toxic impress of the same bacterial poison. It is also scarcely to be doubted that certain forms of neuritis may result from a similar infection. A strong argument for the truth of this view is offered by the observed fact that during endemic outbreaks of multiple neuritis some patients may present symptoms of undoubted poliomyelitis, and in epidemics of poliomyelitis cases of neuritis and also of cerebro-spinal meningitis are frequently interspersed. Specific instances of this fact will be referred to later.

It seems also not improbable that the bacterial poison of still other infectious diseases may incite a true poliomyelitis,—attested by the frequency with which the disease appears as a sequel to, or complication of, scarlatina, measles, roseola, and acute malarial infection.

This toxin, whatever its nature, produces morbid histological changes in and near the motor area of the central spinal gray matter, usually in the cervical or lumbar enlargement, or in both, and on one or both sides of the cord. In the early stages the microscope reveals an acute localized inflammation, with congestion and capillary hemorrhages, a marked round cell infiltration, together with a parenchymatous degenerative lesion in the cell bodies and processes of the motor neurons, accompanied by corresponding degenerative alterations in those muscular fibres to which the affected nerve filaments are attached. At a later period the affected portion of the cord is found to be shrunken and sclerosed, many motor cells, nerve, and muscular fibres completely destroyed, the loss being partly compensated for by an increase in the connective tissues.

The disease is most often met with in children at about the second or third year of life, although it has been seen at all ages; it occurs equally in the two sexes; in all races; in all portions of the known world and under all climatic conditions.

It is somewhat more frequent in malarial and miasmatic localities, near rivers and streams or bodies of water contaminated by organic matters, and occurs most frequently during the summer months.

It appears sporadically, or, as is most frequently noted, the cases come in groups of two or three or more. Instances of its seeming epidemic, or at least endemic, occurrence have also been reported, the most notable ex-

amples in North America being an irruption of poliomyelitis in and near Boston in 1894, and the outbreak in Vermont during the same year, studied and reported by C. S. Caverly. This last mentioned is the most remarkable instance of epidemic poliomyelitis on record, and for several reasons merits more than a passing reference. The cases, some 140 in number, appeared from June to September, 1894, in the town and country lying in the valley of Otta Creek, a small stream dammed at several points, and carrying some sewerage. Most of the cases occurred in children, although several adults were attacked, and one man, aged seventy, had a typical case.

Domestic animals, such as fowls, horses, and dogs, also suffered from the malady. The clinical histories of the majority of the cases were typical of poliomyelitis, but some of them presented the features of peripheral neuritis, while many of the fatal cases exhibited the convulsions, coma, and other symptoms of cerebro-spinal meningitis, being diagnosed as such by the physicians in attendance. We have, then, presented to us the interesting fact that during the same epidemic, and presumably from the same exciting cause, there occurred cases of poliomyelitis, neuritis, and cerebro-spinal meningitis, a circumstance lending color to the contention of Auerbach that these several forms of nervous disease may result from the same microbic infection. It is also noteworthy that during this epidemic cases of unquestioned poliomyelitis terminated in complete recovery, although a study of the reported cases of recovery convinces me that some of them, at least, were instances of multiple neuritis, rather than of poliomyelitis.

In our own State there has been at least one endemic outbreak of poliomyelitis, that previously reported by me to this Association, as having occurred in Green county in 1896. There were in this instance some fif-

teen cases of the disease during the summer months, confined to an area of country about twelve miles in diameter. Adults were attacked as well as children. The histories of cases kindly furnished me by Dr. G. A. Moore, of Clinton, leave no question that the cases in children were cases of poliomyelitis. One of these patients, a lad twelve years old, was brought to me for treatment, giving opportunity of careful examination, which established the fact that this case was one of true spinal atrophic paralysis. There were no deaths, and no cases at all resembling cerebro-spinal meningitis. Both negroes and whites were attacked; there was much malarial disease in the community at the same time. It is certain that some of the adult cases, many of which recovered entirely, were instances of endemic or malarial neuritis, and not poliomyelitis.

In an effort to find to what extent this infantile spinal paralysis has been seen in Alabama, I addressed letters of inquiry to practitioners of medicine in different parts of the State. Many of our physicians informed me, in reply, that no case of the disease had ever been seen or heard of by them; others report that only one or two chronic cases have been known. Of those who have seen cases, and been kind enough to inform me at length concerning them, I will mention the following:

Dr. E. L. Marechal, of Mobile, saw some years ago in Baldwin county, in the course of a few months, about a half dozen cases of infantile paralysis. These cases were reported to the Mobile County Medical Society, but the report was never published.

Dr. Lucius E. Starr, of Camden, Wilcox County, has during the past four years seen three chronic cases, but has known of no acute case during that time.

Dr. J. P. Furniss, of Selma, informs me that during ten years past he has met with quite a number of cases

of infantile spinal paralysis; he thinks the disease more common in whites than in negroes, and more common in females than in males. He has never known an instance of complete recovery from the disease.

Dr. Andrew Jay, of Evergreen, has treated four cases. One of these was to all appearances the result of an attack of roseola. In a second case the first attack of the disease was almost entirely recovered from, but a second attack occurred eighteen months later and resulted in permanent paralysis. In three of the four cases the attack came on with convulsions and well pronounced cerebral symptoms, and idiocy, with epilepsy, supervened in one instance, suggesting the thought that this was most probably an infantile cerebral palsy, rather than a poliomyelitis anterior.

Three cases of infantile spinal paralysis were seen by me in Tuscaloosa in 1896 and 1897. I have seen no acute case in Mobile during the three years of my residence there, and have been unable to learn of the occurrence in Mobile of any case during that time.

It would seem, then, that poliomyelitis has occurred but sparingly in Alabama. I believe, however, that a more accurate knowledge of the symptomatology of nervous affections on the part of the general practitioner would result in the discovery of a larger number of cases. I have found in conversation with, and in letters received from, physicians concerning this disease that some confusion exists regarding the exact nature of anterior poliomyelitis and its differentation in children from other forms of nervous disease, somewhat resembling a true infantile paralysis.

A few words, then, concerning its symptomatology and diagnosis: In typical cases the onset is rapid. The child is one day well and playful, the next, is fretful, feverish, and ailing. An initial chill is not infrequent;

the temperature rises rapidly to 102° F. or more; there is much gastro-intestinal disturbance, scanty, high-colered, urine; nervousness, restlessness, possibly convulsions or spasmodic movements. At this stage there is, as a rule, nothing characteristic, and nothing to suggest the impending occurrence of a serious paralytic attack. Within a few days it is discovered that the child has lost the use of one or more limbs, the legs most frequently, and upon examination a flaccid paralysis of most of the muscles in the affected extremities is brought to light. The muscular tissue is soft and yielding, devoid of tone, the electrical reaction of degeneration is present, the tendon reflexes are abolished, and there may be coldness and circulatory sluggishness in cutaneous surface. Pain and tenderness are sometimes present to a limited degree, but sensory abnormalities are in most instances conspicuously absent. The reflex control of bowels and bladder remains unimpaired. The motor paralysis has often reached its height before it is discovered, but in some cases there is slow progression for a short time. The fever and systemic disorder subside after a few days, and the child is left nearly or quite as well as before the attack, save that the paralysis persists; and even in the paralysis there is usually a marked improvement, many muscles quickly regaining their power of contractility. The permanently affected muscles undergo rapid atrophy, and the limbs diminish in size. There is a slow but continued improvement in muscular power during several months, after which, in cases which are not treated, the condition remains nearly stationary, and the patient goes through life with impaired and shrunken limbs. The remote secondary effects of the nerve cell degenerations and muscular atrophy are contractions in certain muscle groups, with possibly spinal curvature, club foot, or other deformity, and a partial

arrest of development in the affected limbs, which are left permanently smaller and shorter than normal, and may show joint malformations.

In atypic cases the fever and general systemic disturbance may be absent or so slight as to be entirely overlooked, the motor paralysis being the first indication of the onset of the affection.

In other cases the cerebral symptoms predominate, with mental confusion or excitement, perhaps coma, often general convulsions. These cases so closely simulate cerebro-spinal meningitis that there may be difficulty in making an early diagnosis. The subsequent appearance of the atrophic muscular paralysis would, of course, clear up all doubts.

The other difficulties in diagnosis consist in distinguishing the disease under consideration from a neuritis, and from the infantile cerebral palsies. Between neuritis and acute anterior poliomyelitis the following differences exist: Neuritis is a disease of adults, poliomyelitis of children; in neuritis, pain, tenderness and paræsthesias are early and prominent symptoms; in poliomyelitis they occur in minor degree, or not at all. The onset of neuritis is slower and more insidious, the paralysis resulting from it advances more slowly and from below upwards, and almost all cases of neuritis, not fatal in early stages, end in complete recovery, whereas, the paralysis of poliomyelitis persists through life.

In the acquired cerebral paralysis of childhood the onset somewhat resembles poliomyelitis, but the presence of exaggerated, instead of lost, reflexes, and the persistence of normal electrical reactions, the predominance of cerebral symptoms, with the absence of that flaccid muscular paralysis and atrophy so typical of poliomyelitis should make errors in diagnosis impossible. Among the remote after-effects of cerebral pal-

sies, are idiocy or other forms of mental weakness and epilepsy, sequelae unknown after poliomyelitis.

Paralysis from nerve injuries received at the time of birth, or similar peripheral nerve lesions occurring at subsequent times from dislocations or other traumatism, as well as the paraplegic spastic paralysis of compression myelitis, can only be confused with the paralysis of poliomyelitis where careful examination is not made.

The prognosis of infantile spinal paralysis is favorable as to life, unfavorable as to complete recovery from the paralysis. There are, however, not a few reported instances of complete restoration of power to the paralyzed limbs. The milder the case, and the more nearly the symptoms approximate those of neuritis, the greater the likelihood of recovery. The majority of fatal cases are, on the other hand, those which give clinical evidence of a cerebral complication. The reasonable expectation in any typical case of poliomyelitis is that the child will recover from the acute illness, that the paralysis will rapidly diminish in extent and in severity until a certain point is reached, and that the degree of improvement after this will be very slight in neglected cases, very considerable in cases which are judiciously and persistently treated, as it is always possible by treatment to prevent the contractures, deformities, and extreme incapacity so common in the cases which are allowed to pursue their downward course unmolested.

The treatment of acute anterior poliomyelitis during the stage of febrile invasion is much the same as that employed in other forms of bacterial infection; such as, a mercurial purge, rest in bed, acetanelide or phenacetine to reduce fever and alleviate pain, with the addition of quinine in the event malaria is suspected. An ice-bag may be applied to the spine, and the affected limbs enveloped in cotton batting. Counter-irritation

to paralyzed limbs is useless. Of specific remedies, we have none. The nearest approach is afforded us in the salicylates, the administration of which in quantity sufficient to produce the full physiological effect of the drug being unquestionably beneficial, and to a certain extent curative. Wharton Sinkler, of Philadelphia, has recently reported a case of this disease, in which complete recovery followed the administration of sodium salicylate.

After the fever has subsided tonics and a nutritious diet are indicated, and so soon as all the tenderness has disappeared the limbs should receive systematic massage; which may be advantageously supplemented by a daily rubbing with cod-liver oil. If, as is often the case, the services of a skilled masseur can not be obtained, some member of the family may be taught to give a very useful rubbing. Passive movements are also to be employed, and the child kept in the open air as much as possible. Faradic electricity cautiously used in the way which will produce most efficient muscular contractions with the least discomfort is of great value, the object of this, as in the use of massage, being to prevent muscular atrophy. It should be remembered, however, that electricity during the early stage of the disease is positively contra-indicated, and that at no time should a stronger current be employed than is necessary to produce distinct muscular response.

In cases in which the deformities have already occurred, much can be done toward correcting them by the use of properly fitted orthopedic apparatus. Surgical procedures have also been resorted to in such cases with some benefit, the modern operation being the transplantation of tendons, i. e.. separating the paralyzed muscles from their tendons, and re-attaching these tendons to healthy muscles.

In conclusion, I would insist that judicious treatment, properly and patiently carried out for months, will in all cases result in a degree of improvement far greater than in the beginning seemed possible. No case of infantile spinal paralysis, however unfavorable, should be regarded as beyond the reach of remedial measures.

URIC ACID.

By C. W. Wilkerson, M. D., Montgomery. Ala.

Member of the Medical Association of Alabama.

The characteristic of modern medicine is the exalted position which the study of the origin of diseases has attained. The aspect of medical science has in the past few years completely changed. For many ages our great masters, groping in the darkness, so to speak, paid little or no attention to the cause of disease, but confined their labors to the verification of symptoms, to the searching after anatomical lesions, and to the studying of pathological conditions.

To this great change is due the rapid progress we have made. Still, with the high degree of success already attained, we have yet a sea of unsolved mysteries to cross, many dark spots upon which the light must and will be turned, and many blank spaces to be filled in, which will gradually be done by the onward progress of original research.

When examining and comparing the statistics of all the diseases to which the human subject is heir, our greatest interest should be manifested toward those which are the most frequent, and our studies and invegitations should be most ardently applied to the causes of those pathological conditions and lesions with which we most often come in contact.

The cause of the disease which we are called upon to treat must first be ascertained, else our efforts to cure

will be fruitless. To remove the cause means the cure and prevention of disease.

All diseases must originate from one of two sources, namely, from conditions originating from without and introduced into the body or from those originating within the body.

In discussing the subject of this paper the first-class does not concern us, so, we shall turn our attention to the second division.

Much has been written upon auto-intoxication and many are the theories advanced as to the toxines formed, their mode of formation, their elimination, retention, and their effects upon the human organism. Some one has rightly said that the living organism, in the normal, as in the pathological, state, is a receptacle and laboratory of poisons.

These toxic principles being continually formed, nature has necessarily and wisely provided many avenues of elimination, or sewers, as it were, to drain away these noxious formations, the principal ones being the lung, kidney, intestinal tract, and the skin. The kidney being the only one playing the single role of an elaborator is the most important organ of elimination, as it eliminates some of every thing save gaseous material.

Of all toxic substances formed in the body and eliminated by the kidney I think uric acid is the greatest mischief maker, and the cause of more disease and distress. Hence, it is to this substance that I invite your attention.

What is uric acid? Physically, pure uric acid is a white, crystalline, tasteless, and odorless substance, almost insoluble in water, requiring 1900 parts of boiling and 15000 parts of cold water for its solution.

Chemically, uric acid is a bi-basic acid forming three classes of salts, viz.: (1) The neutral urates; (2) bi-urates, and (3) quadri-urates.

Uric acid is a metabolic product, produced in the living organism. It is found in small quantities in the normal urine of the human being, in combination chiefly with the metals, sodium, potassium, and ammonium, and occasionally with calcium and magnesium.

Uric acid is also found in the different organs and tissues of the body, where it has been stored away, either by overproduction or deficient elimination. I do not mean to say that uric acid in the free state is found in the blood and tissues, for, as such, it can not exist, nor can the first class of salts exist in the living organism. It is the third class of salts, namely, the quadri-urates that are originally contained in the blood. Owing to the unstableness of these salts they in turn unite with the sodium carbonate of the blood, forming the second class, namely, the bi-urates or bi-urate of sodium which, if produced in larger quantity than the fluids of the body can retain in solution, or if, from pathological conditions, not eliminated by the excretory organs, become deposited in the various organs and tissues of the body.

Many theories are advanced as regards uric acid and and its many peculiar and disturbing manifestations. These I shall not enter into, as lack of time forbids, especially when there are many known facts to engage our attention.

While uric acid compounds have for centuries been known to exist in the living organism under certain pathological conditions, it was not until 1775 that Scheele discovered it in the urine. In 1787, Wallaston proved its presence in the concretions of gout; in 1847 Sir

Alford Garrod first found the sodium salts of uric acid in the blood of gouty subjects.

This discovery led to the much discussed subject as to whether uric acid is the cause or result of disease. Opinion was then greatly divided, though at the present day it is generally conceded that uric acid is the cause and not the result of disease. Of this I am firmly convinced, and all the data I can abtain upon the subject tends to confirm my conviction.

During physiological equilibrium we find that in the elimination of urea, which is the complete oxidation of nitrogen ingesta, and of uric acid, an incomplete form of oxidation of proteid matter, there is always a direct ratio; this, Haig puts as the average of one part of uric acid to thirty-three of urea. Disturb this ratio and, sooner or later, the physiological equilibrium is lost, and a pathological condition results.

It is now a well established fact, and generally acknowledged, that uric acid is formed in the liver and excreted mainly by the kidney.

However, in cases of the continued ingestion of albuminoidal matter in excess of the ability of the liver to convert the end products of digestion into urea, uric acid is formed, which, being difficult of elimination by the kidney, is taken into the blood, and there unites chiefly with the sodium carbonate of the blood, being deposited as such in the various organs and tissues of the body.

The retention in the system of a plus amount of uric acid, either from overproduction or deficient elimination, is sure to give rise to harmful, and oftentimes fatal, results, some of which I shall enumerate.

If Haig is correct in stating that uric acid in the blood alters its physiological condition, (his observations and experiments seem to bear him out in this assertion), we no longer have in this circulating medium

a perfect pabulum so necessary to maintain physiological equilibrium.

The result of this condition is disturbed nutrition, and disturbed or imperfect nutrition, as we all know, has its effect either directly or indirectly upon every cell of the human organism.

At first, this statement would seem erroneous, for, it is in those whose physical condition seems to be above par that we find the most distressing manifestations of uric acid. It is in these subjects that the uric acid headache, as Haig has named it, is so common.

That these lithæmic conditions result from the circulation of uric acid in the blood there can be no doubt, for, as Haig has proven, so long as the ratio of urea and uric acid is one part of uric acid to thirty-three of urea there is no headache, but prior to the headache we have it as high as one to forty, falling as low as one to twenty after the headache has passed away.

It has also been demonstrated that uric acid in the blood affects the heart, causing a slow heart and high arterial tension, which we know are concomitant conditions of the uric acid headache.

It has been suggested by DuBois Reymond that the headache is produced by the irritation of the vaso-motor nerves in the region of the cervical sympathetic, giving rise to contraction of vessels in certain areas, followed by dilatation and congestion, which produces the pain.

Dr. Brunton suggests that the proximal ends of certain vessels are dilated, while the distal ends are contracted, giving an impact of blood against the contracted extremity, which produces pain.

These theories may or may not be correct, though both seem to be rational. However, the fact still remains undisputed that with these headaches we have a plus excretion of uric acid, which means an abnormal

amount circulating in the blood, producing the painful and peculiar phenomena of headache and uricacidemia.

Haig lays almost every headache to uric acid; even in the menstrual headache he claims that uric acid plays a part as an ætiological factor.

As the amount of uric acid in the blood is dependent upon the alkalinity of the blood, and its solvent properties, whenever that alkalinity is diminished, or the blood becomes, as we may say, a super-saturated solution, uric acid is deposited, as before stated, in such organs and structures of the body as seem to have a predilection for it, as the spleen, joints, and the fibrous tissues.

This explains the pain of rheumatism, arthritis, gout, and kindred diseases, and this fact offers the most satisfactory explanation of cerebral hemorrhage, so common in the plethoric. The degenerated blood vessel, caused by the deposition of uric acid in the fibrous coat, can no longer withstand the high tension, hence gives way at the point of least resistance.

Nephritis, especially the interstitial variety, finds its solution in this circulatory disturbance. Many forms of indigestion are but the results of the retention of this pestiferous compound. Vertigo, mental depression, insomnia, chorea, hysteria, epilepsy, and other nervous manifestations, both of low and high degree, are oftentimes traceable to uric acid. Many forms of valvular disease of the heart are but the result of the deposition of uric acid compounds in the valves, causing a roughened surface, or a contracted and imperfectly fitting valve. Hypertrophy of the heart is, I think, more commonly caused by this one agent than any other.

Hence, we see that uric acid is an all-important and common etiological factor in producing diseases, from the most trivial, to the most serious. This being a fact,

to my mind undoubted, I wish before closing this paper, to consider some of the salient points in combating this toxine.

First, we should prevent its accumulation or retention in the organism, if possible. This can be done by maintaining, as far as possible, a physiological equilibrium, and to acomplish this, especial attention should be paid to diet and exercise, and to the normal functions of the excretory organs.

As to diet, we should carefully select our articles of food, so that the daily ingestion of both nitrogenous and non-nitrogenous substances should not exceed the daily demands of the organism, but should, as near as possible, maintain the proper ratio of nitrogen to carbon, which is one of nitrogen to 3.6 of carbon.

If, however, from any cause, uric acid and urea have lost their ratio, the urates being held back, our duty is to remove them from their numerous storehouses by administering those drugs which act as solvents, such as the alkalies and salicylates; then resort to such diet as will diminish nitrogenous metabolism.

To enter in detail the broad field of dietetics, and the administration of the various drugs, to rid the body of urates, would require too much time, hence, I will leave the selection of these to the judgment of the practitioner, to be arranged to suit each individual case, and will lay down only the broad principles, viz.: Prevent nitrogenous metabolism, and administer such drugs as will increase the alkalinity of the blood, and dissolve the urates, thereby favoring their elimination.

Avoid the use of acids, as they relieve the pain and discomfort in some places to but sooner or later intensify them in others. It seems that the most prompt relief from acute uric acid headache and mental depression, muscular soreness, joint pains, etc., is

obtained from the salicylates. These, it would seem, from what I have previously stated, would intensify the pain, as they dissolve the urates and put more into the circulation, but it is not so, as experience teaches. This, Haig attributes to the union of the salicylates with the urates, forming salicyluric acid, a compound that neither irritates, nor increases arterial tension.

Colchicum is a remedial agent, worthy, I think, of especial mention. It has been proven that the pain in gout and rheumatism, especially of the shifting and neuralgic variety, is relieved by the administration of this valuable drug. Just how it acts is not fully understood, though Prof. Chelius states that it changes the chemical constitution of urine in arthritic subjects, producing an increase of uric acid. Dr. Maclajan claims that it increases the proportion of both urea and uric acid in the urine and, when they previously exist in the blood, separates them from it.

In conclusion, I wish to urge upon all the necessity of carefully looking for uric acid in diseases of obscure origin, for in many of them it will be found that uric acid is the primary disturbing factor.

DISCUSSION.

Dr. B. L. Wyman, of Birmingham, in opening the discussion, said: I cannot allow so valuable and interesting a paper, as the one just read by Dr. Wilkerson, to pass without some discussion. The subject of uric acid and its relation to physiological processes has always been one of much interest to the profession. Physiological chemistry has taught us that uric acid is not the only agent which results from disturbed metabolism, but that there are other toxic products which are even more productive of disease. In fact, some have contended that

uric acid has no toxic effect when circulating in the blood. Whether this be true, or not, is a question which has never, so far as I know, been definitely settled. Of one fact we are sure, and that is, that there are other nitrogenized waste products, chief among which are the leucomaines, which are very toxic in their influence, and frequently lead to changes in the kidneys. Under the more popular name of auto-infection much has been written in recent years upon the baneful effects of the accumulation in the blood of the products of imperfect oxidation of the nitrogenous foods. These effects are becoming more and more apparent each year, as shown by the many physical and nervous wrecks which occur during the middle period of life, when all of the functions of the body should have reached their highest capacity. The cause, I think, is easily explained. The increasing number of those who suffer with this form of auto-infection is largely the result of our modern civilization and mode of life. In this age of rapid transit, most men live too fast. The competition in every walk of life is so sharp that the expenditure of vital energy is at the expense of normal metabolic processes. Most of us eat too much and take too little physical exercise, and, as a result, we have, as the Doctor has well said, an accumulation of uric acid, and other waste products, the result of imperfect oxidation. In other words, "the input is greater than the output." The liver, being the organ one of whose functions is to convert the nitrogenized food-products into urea, becomes embarrassed and fails to perform its functions. These cases of uricæmia are especially common among the higher classes, and particularly among those who do much mental labor. Professional men are especially liable to suffer with this form of auto-infection. Hereditary influence, also, I think, plays an important part as an etiological factor in some cases.

The toxic influence of these waste products gives rise to a very complex group of symptoms, known in modern medicine as lithæmia, or, as some have happily termed it, American gout. The symptoms have been so well and so clearly stated by Dr. Wilkerson that it is unnecessary to dwell upon this phase of the subject.

There is one point, however, to which I desire to call attention, and that is the relation of uric acid, and other kindred products, to the diseases of the nervous system. We are all very familiar with the uric acid headache, which is a common accompaniment of the lithæmic state. It is an early morning headache, and one often preceded by disturbed digestion, which frequently culminates in a violent attack of migraine. I believe that the vast majority of these migrainous attacks are produced by this form of auto-infection. There are many other nervous disturbances produced by the same toxic influence. Lithæmic patients are irritable, restless, and suffer more or less with insomnia. Many of them are depressed and melancholy, and very apprehensive, the mind being filled with gloomy forebodings and, in some instances, I have seen the condition lead to pronounced aberrations of mind. A large number, and in fact the majority, of cases of neurasthenia are caused by lithæmia, and to relieve the nerve exhaustion you must change the patient's habits and mode of life and eliminate the toxic principles which produce the nervous disturbance. If this be the correct doctrine, the rest-treatment, as carried out by Weir Mitchell, indiscriminately resorted to in all cases of neurasthenia, is not the proper course to pursue. With reference to the treatment of chronic lithæmia, I have very little to add to what Dr. Wilkerson has said. As the trouble is largely produced by sedentary habits and over-indulgence at the table the great desideratum is to limit the amount of food in-

gested, and increase oxidation by active physical exercise in the open air. The patient should be restricted in his diet, especially, should he avoid the red meats. He should rather become a vegetarian and take of the succulent vegetables and fruit, articles of diet which contain the vegetable acids. Increase elimination through all the natural channels. The bowels should be kept open by a laxative, and an occasional dose of calomel is necessary. But, as a rule, a teaspoonful of phosphate of soda in a glass of hot water before breakfast is all the laxative medicine required. As the urine in these cases is always scant and of high specific gravity, the saline diuretics form a very important part of the treatment. The patient should be advised to drink freely of any of the alkaline mineral waters, preferably those containing chloride of sodium and the sulphates of magnesia and soda. I have obtained excellent results from the use of some of the preparations of lithia, and while I do not believe lithia to be a panacea for all the ills which result from uric acid in the blood, the convenient and effervescent tablets on the market furnish a very pleasant and palatable method of administering this alkali. I am accustomed to prescribe a tablet, sold under the trade name of Tartar-Lithine, which is simply the bitartrate of lithia. I advise the patient to take two of these tablets in a glass of water before each meal and at bed time. They are pleasant to the taste and produce free diuresis. In addition to the use of diuretics and regulating the diet and habits of the patient, I order the hot bath, with or without the addition of common salt. I believe this to be one of the best means of removing the accumulation of waste products. If all these means fail to give relief, it is always best to send the patient away to some alkaline mineral spring, where he will be removed from all sources of worry and responsibility. The benefit de-

rived from a sojourn at a watering place is due largely to the rest and change of scene, but in some measure to the large amount of water which the patient drinks. I enjoyed the Doctor's paper very much and desire to thank him for directing our attention to one of the most common sources of disease.

Dr. James T. Jelks, of Hot Springs, Ark., (by invitation) said: It gives me great pleasure to accept your courteous invitation to take part in the deliberations of your Association.

While I was reared in Union Springs, Ala., and studied medicine under that Nestor of the profession, Dr. Charles H. Franklin, this is the first time I have ever had the pleasure of attending a meeting of this Association.

I have enjoyed the paper of Dr. Wilkerson very much indeed. It is an able one and treats of a subject of very vital importance. From the cradle to the grave uric acid is a very disturbing agent. From the "growing pains" of childhood to the decrepitude of old age it is an ever-present factor in the ills of life. If we may exclude tuberculosis in all its varied manifestations, I doubt if all the other agencies of life combined produce as much suffering as the poison we know as uric acid.

For the purposes of this discussion it matters not whether it is uric acid, zanthin, hypozanthin, or some other poisons left in the system by defective kidney action, the fact remains that there is a disturbance of metabolism, followed by much suffering. I am a believer in Haig's theory that there is faulty elimination and not excessive manufacture. If this be true, it then behooves us to study carefully those things which tend to store

and those agents which assist in elimination of this poison or poisons. Among the former, cold weather, cold drafts, acid drinks, all forms of wine and beer, coffee and tea, many of the metallic salts, as those of iron, bismuth and sulphur compounds, a diet into which meat or albuminous food largely enters, render the blood acid, prevent the ready solution of this poison, and hence it is stored up in the joints, liver, spleen, and muscles, to be at some later day the agent of much suffering.

Heat, warm weather, a vegetable and milk diet, certain alkaline remedies, colchicum and the salicylates, are known to produce a solution of this poison, or to render it soluble. Hence, cool or cold weather, with dampness, favor the development of attacks of rheumatism and gout, while warm weather and warm baths favor the solution of uric acid, and therefore its elimination. This is one of the ways in which our baths at Hot Springs, Ark., help us to cure this class of patients.

As I stated above, there are other ills of life besides rheumatism and gout which are the results of uric acid. Many of the headaches, as Dr. Wilkerson states, are due to uric acid circulating in the blood in too great a ratio to Urea.

Hence, we have what has been aptly termed a uric-acidæmia. Many cases of vertigo are produced by the same poison or its compounds, and late in life interstitial nephritis may be laid at its door, while Haig thinks diabetes, hysteria, melancholia, and epilepsy may be explained on the hypothesis of faulty elimination of uric acid.

I am sure the world owes to Alexander Haig a heavy debt of gratitude for the pains-taking and laborious way in which he has worked out this problem, and this society is indebted to Dr. Wilkerson for the splendid paper he has read to us.

FISTULA IN ANO.

By Dyer Findley Talley, M. D., Birmingham.

Member of the Medical Association of the State of Alabama.

Owing to its peculiar position and function, the rectum is extremely prone to disorders of various kinds and degrees. Fistula is rather common as one of these affections, and may be found in subjects at any period of life, from infancy to extreme old age. It consists of a sinus lined with granulation tissue, and is situated in or near the wall of the lower part of the rectum. When an abscess forms in the anal region, and is opened or ruptures externally, a sinus is often left which does not heal, or sometimes recurs after complete closure, and this forms a *blind external fistula.* When the rectum has been burrowed through, beginning with ulceration of the mucous membrane, or when a peri-rectal abcess has ruptured into the bowel, we have a *blind internal fistula* formed. When the fistula communicates with the bowel and opens externally it is called a *complete fistula.* Very rarely, we find a *complete internal* fistula; this being one which opens through the bowel rather high up, runs down outside the rectum, then enters it again. Fistulæ may be further classified into *anal* and *rectal,* depending on the point of entrance to the bowel, the former being those that open just inside the orifice, the latter those that pierce the rectum above the sphincters.

It appears that abscesses in the region of the anus, or rectum, are the most frequent causes of fistulæ; they are also due to infection of the peri-rectal tissues, through

rectal ulcers. They may be caused by injury to the rectum by foreign bodies. Necrosis of the pelvic bones may be the starting point of the trouble. In children fistula may be caused by worms in the lower bowel. Some authors believe that exposure to cold and damp may be the exciting cause of fistula, by first producing an ischio-rectal abscess; however, this theory is hardly tenable, since there must be some infection introduced to cause an abscess. It is a well known fact that fistulæ are rather common in tubercular subjects, which is due, no doubt, to the breaking down of tubercular deposits in or near the rectum. Anal fissure may cause a small dorsal fistula. I will report two cases of this kind, seen at St. Marks Hospial, in London. Mr. G. B. consulted Mr. Edwards on account of great pain during and after defecation, from which he had suffered for about one year. This patient said he had been treated for piles. Examination revealed a well-marked fissure, with internal and external tabs; on pressure over the latter, a drop of pus was seen to exude from under it, which indicated the existence of a sinus or fistula. The operation for fissure and fistula was performed in the usual way, and patient made a rapid recovery.

G. P., aged 59, had suffered for two months with great pain during and for two hours after defecation. In a month or six weeks after this commenced, he noticed a discharge from the bowels. On examination, a well-marked fissure was seen, with a small fistula extending outwards from it, and opening through the skin towards the coccyx. Mr. Cooper operated for fistula in the usual manner and patient recovered. The account of the symptoms shows that the fissure formed first and subsequently gave rise to the burrowing, which caused the fistula.

Fistula is rare in children, but has been seen in the rectal clinics of London. A male child, one year old,

was admitted to St. Marks, with a small fistula on the right side. His mother stated that she had noticed it shortly after the birth of the child, and it had been discharging ever since. This little fellow was subjected to an operation and made a good recovery.

As we would naturally expect, most fistulæ are preceded by abcesses, or by the symptoms of ulceration of the rectum. In some cases, especially those of a tubercular nature, after slight pain and swelling, the skin gives way and a thin purulent fiuid escapes. These abcesses are usually found on one side of the anus and, in some cases, they form a large and extremely painful mass. They may open externally in more than one place, and in some cases the whole buttock and perineum are riddled with openings. The skin between the openings is usually discolored and unhealthy. Multiple internal openings are not so frequently found, and only exist when there is ulceration of the bowels as the cause of the fistula. The internal opening is usually within one inch of the anus, and is found very frequently in the median line dorsally. Mr. Goodsall, one of the attending rectal surgeons at St. Marks Hospital, taught me an important point which aids very materially in finding the internal opening of a fistula. The point he makes is that there is usually a definite relation existing between the external and internal openings, that is, all external openings posterior to a plane drawn transversely through the center of the anus have their internal openings in the median line posteriorly, the sinus taking a tortuous or curved course; all openings anterior to this plane have their internal openings in the bowel immediately opposite the external orifice and on the same side of the bowel, the sinus being comparatively straight. After he spoke to me of this relationship between the external and the internal orifices, I noticed closely for it in his operations and those of the other rectal surgeons, and found it practically true. A knowledge

of this relationship is of especial service in finding the internal opening in a recent fistula when there is not sufficient evidence by digital examination to trace the source of the sinus. In an old case, when the walls of the fistula have become contracted and hard, the finger can trace the course of the sinus very readily, as it feels like a whip-cord under the mucous membrane. The sinus between the bowel and the skin does not always constitute the whole of the fistulous track, as, it may have numerous branches and extend above the internal opening. The worst form of fistula with which we have to deal is the horse-shoe variety, in which we have several external openings on each side of the anus, the fistulæ joining at the median line posteriorly. The external openings are sometimes quite a distance from the anus, and the surrounding tissues are extensively undermined. The abscess which causes this form of fistula begins at the lower and posterior part of the rectum and, instead of bursting through, burrows around the bowel, escapes from under the muscles, and breaks through on both sides.

The discharge from fistulous openings is usually scant, but it often chafes the surrounding skin, and causes a great deal of annoyance and discomfort. There is very little pain connected with a fistula as long as it remains open and allows the discharge to escape freely. These tracks are rarely large enough to allow the escape of fœcal matter through them. Mr. Edwards once saw a case in which a polypoid growth, with a long pedicle, had escaped through an unusually large fistulous track. The growth could be shoved back through the track into the rectum. It is not uncommon to find debris and a lot of hair in the tracks.

There is usually little trouble in diagnosing fistula, with the exception of the *blind internal* variety, which

in many instances is hard to find. In making an examination, the patient should be placed on the affected side and in Sims' position; the anal and peri-anal tissues should be parted with the index fingers, to discover any unnatural condition, such as induration, attended with pain on pressure. In this way, the blind extremity of a blind internal fistula may be found, and by opening it externally a complete fistula is formed. In the complete and blind external varieties a probe is introduced and pushed carefully along the track, and in this way the course is generally found with little trouble; when the internal opening cannot be found by palpation and the probe, a colored fluid may be forcibly injected through the external opening, the rectum being held open with a speculum, when the fluid may be seen coming through the internal opening.

When this is discovered, the probe is acutely bent and introduced and the track explored.

As a rule, instruments are entirely unnecessary in the diagnosis of fistula. The condition may be discovered by inspection or palpation and nothing further is necessary until patient is anæsthetized for the operation, when all of the complications of the fistula may be learned. It is much more agreeable to a patient not to have instruments used during the examination.

The English surgeons have quite a convenient method of indicating the position of a fistula, or any lesion in the anus, or lower rectum, by comparing the anus to a clock dial and making the posterior median line correspond with 12 o'clock, then the anterior median line is 6 o'clock. The intermediate hours will indicate very accurately the position of the lesion. The posterior median line is called 12 o'clock, because these examinations are so often made with patient in the knee-chest position.

There are several reasons why a fistula refuses to heal

spontaneously. First, on account of the pus that forms in the sinus, which destroys any granulations which attempt to spring up and close the track; then, the liability of getting some foreign material in the sinus, such as hair and fœcal mater. The most important reason, however, is the fact that the necessary rest for healing cannot be had where the sphincter muscle is constantly contracting and relaxing. The indications for treatment, therefore, are to put this muscle at complete rest and lay the sinus open, so neither pus nor foreign matter will be retained. Then, the granulations will fill the wound, and the sinus will become obliterated. Most patients who apply for treatment want to be cured without an operation, and too many physicians, in order to make themselves agreeable, are willing to offer some hopes of a cure without the knife. The result is that the patient, after some months' treatment, becomes discouraged and loses confidence in the doctor's treatment; at the same time, the physician tires of the case and loses interest in it, because he sees his treatment is accomplishing nothing. When a patient with fistula applies for treatment, it is best for both patient and physician that the latter shall explain the absolute necessity for an operation, and not be influenced by the entreaties of the patient for a cure without it. It is also important to insist on an early operation, as the fistula may ramify and become much worse in the course of a few weeks, or months. This is especially to be feared in the complete and blind internal varieties. To prepare for an operation, a patient should have a dose of calomel two nights before, a dose of salts the next morning, and be confined to a liquid diet the day before the operation. He should take no nourishment on the morning of the operation, and should have a copious antiseptic enema of boric acid solution. In operating, a general anæsthetic is necessary, except in very superficial and short

sinuses where infiltration solution,* or a weak solution of cocain, may be injected, and the tissues divided. In this country the patient is placed on a table in the lithotomy position, but a more convenient position, used by the surgeons in London, is, to place him on one side upon a high table; the knees are drawn up and the buttocks placed on the edge, or slightly over-hanging the side, of the table. When the fistula is on one side the patient is placed on that side. The parts around the anus should be shaved and thoroughly scrubbed with soap and water, then rinsed off with a solution of carbolic acid. A probe-pointed director is now inserted into the fistula and carefully passed up to the internal opening, and, if the latter be not too high up, after the director passes through it, its end should be pulled out through the anus, then the tissue over the director is divided with a sharp bistoury. The granulation tissue in the track should now be removed with a sharp curette. If the fistulous track be much indurated and drawn, the posterior wall should be freely incised. The overlapping edges of skin and mucous membrane are now removed with scissors.

When the internal opening is more than an inch up the bowel, it is hard to pull the end of the director out through the anus, and if it cannot be done the probe director is passed through the fistula into the bowel and the tissues over it divided with scissors. An

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* ℞ Cocain Hydrochlor.....grains, 1½
Morphiæ Hydrochlor.....grains, ⅜
Sodii Chloridi.....grains, 8
Acidi Borici.....grains, 15
Aquæ Destil.....ounces, 8½
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error, often made in doing this operation, consists in pushing the probe through the wall of the fistula and leaving a part of the fistulous track; this can be avoided by care and patience in introducing the director. There is a difference of opinion as to the best method of dealing with sinuses extending above the internal opening; some of these tracks are merely sub-mucous, while others are outside the muscular layers of the bowel. The sub-mucous sinuses should be laid open, but the deeper ones should be left, when it would become necessary to cut the internal sphincter in laying them open. When both sphincters are cut, there is considerable danger of fœcal incontinence resulting.

In operating on a *blind external* fistula, a place can usually be found where there is only a thin layer of tissue between the finger in the bowel and the point of the probe in the fistula. The probe director is pushed through at this point and the overlying tissue incised.

The treatment of a *blind internal* fistula is not so simple. If there be an indurated mass in the anal region, it should be cut into, then, a probe is introduced and may pass on into the rectum, in which case the operation is completed in the usual way. When no external opening is made, it is necessary to find the internal opening, and introduce a bent probe, upon which the intervening tissue is divided. In these operations for fistula we seldom have alarming hemorrhage. When a vessel large enough to spurt is cut, it should be twisted or ligated. When there is considerable general oozing a vulcanite tube wrapped with gauze may be introduced, which will exert sufficient pressure to stop the hemorrhage. After the operation, the incision should be packed with sterilized gauze, and a sterile dressing held over the anus by a T bandage. The gauze in the wound should be removed on the third day and the wound irri-

gated with a hot carbolized solution, then packed again with gauze. This should be done daily until it heals. If the wound proves sluggish and granulations do not spring up, some stimulating dressing, such as the balsam and oil dressing, may be employed. The bowels should be kept gently open, and the dressing changed after each motion. Patient should be kept in bed until wound has entirely healed, unless he be a tubercular subject and need exercise and fresh air. Usually, the wound heals in about three weeks. However, when deep cuts are necessary, and when the fistula is complicated, it may require several months for healing. Occasionally, a fistula will pass through the fibres of the sphincter muscle, and when the overlying fibres are cut the wound will fail to heal, on account of the contraction of the remaining fibres. In this case, the muscle should be cut entirely through and put at rest. Before operating on a horse-shoe fistula, it should be thoroughly explored, and its conformation well understood. Unless this be done, the condition may be mistaken for two or more distinct fistulæ, and if the operation be done with this impression the sphincter will be cut in several places and the patient will probably suffer fœcal incontinence. If the fistula can be treated with one incision of the muscle at a right angle to its fibres, there will be little risk of incontinence.

This form of fistula usually has its internal opening in the median line posteriorly. The operation is done by introducing the probe director into this internal opening and incising back to where the fistula branches, then the director is introduced into the external openings and passed to the posterior incision and the overlying tissues divided. By this means the sphincter muscle is cut at one point only, and its fibres divided squarely across. If the two external openings are for enough

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back for a straight line between them to pass behind the sphincter muscle, this sinus may be opened first and then the dorsal incision into the bowel can be made from the transverse incision. When the over-hanging edges of skin are unhealthy, they should be cut away with scissors. In all cases in which the skin-flap prevents free drainage, it should be cut away.

In a simple fistula with a small amount of pyogenic membrane the fistulous track may be cut entirely out, and the wound stitched up, just as in repairing the perineum, but this should not be done, except where a perfectly clean wound can be obtained. When operating on tubercular subjects, the sphincter muscle should be avoided, if possible, and the patient should not be kept in bed but a few days, if able to get out into the fresh air. These cases also require constitutional treatment. They should have plenty of easily digested and nutritous food, as well as, constitutional remedies, to build up the general strength.

DISCUSSION.

Dr. W. W. Harper said: I see Dr. Furniss present, and knowing that he has had much experience in the treatment of fistula-in-ano, I would like to hear from him.

Dr. Furniss replied that the paper presented by Dr. Tally had so thoroughly covered the subject that he had nothing to add to it.

Dr. Harper then related the history of a case that had fallen under his observation.

Dr. Mack Rogers said: I wish to call especial attention to the careful examination and diagnosis that is so necessary in these cases.

Most men are not careful enough in their examina-

tions of rectal troubles and hence they overlook troubles of a grave nature, and allow them to go undetected and untreated. A positive diagnosis is absolutely essential to rational treatment.

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The necessity for thorough examination of every case that presents itself, to which attention is called in my paper, and of which the gentlemen have spoken, cannot be too greatly emphasized.

ACUTE ENTERO-COLITIS OF INFANTS.

By William Wade Harper, M. D., Selma,
Member of the Medical Association of the State of Alabama.

With the approach of the summer season, when intestinal disorders are apt to become prevalent, I think it will be profitable for us to consider a disease that is very destructive to infant life. According to statistics, the majority of children die before their fifth year, and of the diseases that are responsible for this frightful mortality the most conspicuous is entero-colitis. In this paper, we will discuss only the acute form.

While the exciting cause is some pathogenic germ, bacteriologists have failed to discover the specific organism. In the stools, the streptococcus, colon bacillus, and ærogenous bacteria have been found in large numbers, but which must bear the brunt of the blame is not yet decided, (Hare). The colon bacillus and the ærogenous bacteria are found in the colon and last two feet of the ileum of the healthy infant, and are not hurtful until the intestinal mucous membrane becomes irritated and inflamed. They then produce all the symptoms of an active toxemia. In this respect they are analogous to other germs; the Klebs-Loeffler, for instance. These germs are found in healthy throats, and do no harm, so long as the mucous membrane remains intact, but let there be a lesion of this membrane, and diphtheria is the result. Therefore, in addition to these direct causes of entero-colitis, there must be predisposing ones. Of

these, the principal are: heat, over-feeding, and over-crowding. The exact part played by heat is not yet decided. Aside from the fermental changes which it produces, the thirst, as a result of perspiration, causes the infants to take more milk than they can digest. It is claimed, (Ballard), that an elevated sub-soil temperature increases gastro-enteric diseases. My experience tends to confirm this view, for, as a rule, I have observed that my patients were better when a low temperature was immediately preceded by a rain. According to Seibert it requires a continuous temperature of at least 60° F. for 24 hours to start an epidemic. The reason is, that with a lower temperature pathogenic germs are dormant, but multiply and disseminate very rapidly with a temperature above 60° F. As 90 per cent. of the cases of entero-colitis occur among those artificially reared, it is easy to see the great advantage possessed by breast-fed infants. That over-crowding plays an important role is shown by the greater frequency of entero-colitis in asylums, tenements, and populous centers.

PATHOLOGY.—The anatomical lesions are found in the colon, and in the majority of cases in the last two feet of the ileum. The reason for its occurrence in the last two feet of the ileum is the tarrying of the intestinal contents at the ileo-cœcal valve.

Three forms of the disease are recognized: 1. Catarrhal. 2. Ulcerative. 3. Membranous.

In the Catarrhal, the mucous membrane is inflamed, together with Peyer's patches and the solitary follicles of the colon and ileum. The glands, through cell proliferation, become enlarged and quite prominent. Where these solitary follicles break down, the Ulcerative form is produced.

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of this relationship is of especial service in finding the internal opening in a recent fistula when there is not sufficient evidence by digital examination to trace the source of the sinus. In an old case, when the walls of the fistula have become contracted and hard, the finger can trace the course of the sinus very readily, as it feels like a whip-cord under the mucous membrane. The sinus between the bowel and the skin does not always constitute the whole of the fistulous track, as, it may have numerous branches and extend above the internal opening. The worst form of fistula with which we have to deal is the horse-shoe variety, in which we have several external openings on each side of the anus, the fistulæ joining at the median line posteriorly. The external openings are sometimes quite a distance from the anus, and the surrounding tissues are extensively undermined. The abscess which causes this form of fistula begins at the lower and posterior part of the rectum and, instead of bursting through, burrows around the bowel, escapes from under the muscles, and breaks through on both sides.

The discharge from fistulous openings is usually scant, but it often chafes the surrounding skin, and causes a great deal of annoyance and discomfort. There is very little pain connected with a fistula as long as it remains open and allows the discharge to escape freely. These tracks are rarely large enough to allow the escape of fœcal matter through them. Mr. Edwards once saw a case in which a polypoid growth, with a long pedicle, had escaped through an unusually large fistulous track. The growth could be shoved back through the track into the rectum. It is not uncommon to find debris and a lot of hair in the tracks.

There is usually little trouble in diagnosing fistula, with the exception of the *blind internal* variety, which

in many instances is hard to find. In making an examination, the patient should be placed on the affected side and in Sims' position; the anal and peri-anal tissues should be parted with the index fingers, to discover any unnatural condition, such as induration, attended with pain on pressure. In this way, the blind extremity of a blind internal fistula may be found, and by opening it externally a complete fistula is formed. In the complete and blind external varieties a probe is introduced and pushed carefully along the track, and in this way the course is generally found with little trouble; when the internal opening cannot be found by palpation and the probe, a colored fluid may be forcibly injected through the external opening, the rectum being held open with a speculum, when the fluid may be seen coming through the internal opening.

When this is discovered, the probe is acutely bent and introduced and the track explored.

As a rule, instruments are entirely unnecessary in the diagnosis of fistula. The condition may be discovered by inspection or palpation and nothing further is necessary until patient is anæsthetized for the operation, when all of the complications of the fistula may be learned. It is much more agreeable to a patient not to have instruments used during the examination.

The English surgeons have quite a convenient method of indicating the position of a fistula, or any lesion in the anus, or lower rectum, by comparing the anus to a clock dial and making the posterior median line correspond with 12 o'clock, then the anterior median line is 6 o'clock. The intermediate hours will indicate very accurately the position of the lesion. The posterior median line is called 12 o'clock, because these examinations are so often made with patient in the knee-chest position.

There are several reasons why a fistula refuses to heal

spontaneously. First, on account of the pus that forms in the sinus, which destroys any granulations which attempt to spring up and close the track; then, the liability of getting some foreign material in the sinus, such as hair and fœcal mater. The most important reason, however, is the fact that the necessary rest for healing cannot be had where the sphincter muscle is constantly contracting and relaxing. The indications for treatment, therefore, are to put this muscle at complete rest and lay the sinus open, so neither pus nor foreign matter will be retained. Then, the granulations will fill the wound, and the sinus will become obliterated. Most patients who apply for treatment want to be cured without an operation, and too many physicians, in order to make themselves agreeable, are willing to offer some hopes of a cure without the knife. The result is that the patient, after some months' treatment, becomes discouraged and loses confidence in the doctor's treatment; at the same time, the physician tires of the case and loses interest in it, because he sees his treatment is accomplishing nothing. When a patient with fistula applies for treatment, it is best for both patient and physician that the latter shall explain the absolute necessity for an operation, and not be influenced by the entreaties of the patient for a cure without it. It is also important to insist on an early operation, as the fistula may ramify and become much worse in the course of a few weeks, or months. This is especially to be feared in the complete and blind internal varieties. To prepare for an operation, a patient should have a dose of calomel two nights before, a dose of salts the next morning, and be confined to a liquid diet the day before the operation. He should take no nourishment on the morning of the operation, and should have a copious antiseptic enema of boric acid solution. In operating, a general anæsthetic is necessary, except in very superficial and short

sinuses where infiltration solution,* or a weak solution of cocain, may be injected, and the tissues divided. In this country the patient is placed on a table in the lithotomy position, but a more convenient position, used by the surgeons in London, is, to place him on one side upon a high table; the knees are drawn up and the buttocks placed on the edge, or slightly over-hanging the side, of the table. When the fistula is on one side the patient is placed on that side. The parts around the anus should be shaved and thoroughly scrubbed with soap and water, then rinsed off with a solution of carbolic acid. A probe-pointed director is now inserted into the fistula and carefully passed up to the internal opening, and, if the latter be not too high up, after the director passes through it, its end should be pulled out through the anus, then the tissue over the director is divided with a sharp bistoury. The granulation tissue in the track should now be removed with a sharp curette. If the fistulous track be much indurated and drawn, the posterior wall should be freely incised. The overlapping edges of skin and mucous membrane are now removed with scissors.

When the internal opening is more than an inch up the bowel, it is hard to pull the end of the director out through the anus, and if it cannot be done the probe director is passed through the fistula into the bowel and the tissues over it divided with scissors. An

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* ℞ Cocain Hydrochlor.....grains, 1½
Morphiæ Hydrochlor.....grains, ⅜
Sodii Chloridi.....grains, 8
Acidi Borici.....grains, 15
Aquæ Destil.....ounces, 8½
M

error, often made in doing this operation, consists in pushing the probe through the wall of the fistula and leaving a part of the fistulous track; this can be avoided by care and patience in introducing the director. There is a difference of opinion as to the best method of dealing with sinuses extending above the internal opening; some of these tracks are merely sub-mucous, while others are outside the muscular layers of the bowel. The sub-mucous sinuses should be laid open, but the deeper ones should be left, when it would become necessary to cut the internal sphincter in laying them open. When both sphincters are cut, there is considerable danger of fœcal incontinence resulting.

In operating on a *blind external* fistula, a place can usually be found where there is only a thin layer of tissue between the finger in the bowel and the point of the probe in the fistula. The probe director is pushed through at this point and the overlying tissue incised.

The treatment of a *blind internal* fistula is not so simple. If there be an indurated mass in the anal region, it should be cut into, then, a probe is introduced and may pass on into the rectum, in which case the operation is completed in the usual way. When no external opening is made, it is necessary to find the internal opening, and introduce a bent probe, upon which the intervening tissue is divided. In these operations for fistula we seldom have alarming hemorrhage. When a vessel large enough to spurt is cut, it should be twisted or ligated. When there is considerable general oozing a vulcanite tube wrapped with gauze may be introduced, which will exert sufficient pressure to stop the hemorrhage. After the operation, the incision should be packed with sterilized gauze, and a sterile dressing held over the anus by a T bandage. The gauze in the wound should be removed on the third day and the wound irri-

gated with a hot carbolized solution, then packed again with gauze. This should be done daily until it heals. If the wound proves sluggish and granulations do not spring up, some stimulating dressing, such as the balsam and oil dressing, may be employed. The bowels should be kept gently open, and the dressing changed after each motion. Patient should be kept in bed until wound has entirely healed, unless he be a tubercular subject and need exercise and fresh air. Usually, the wound heals in about three weeks. However, when deep cuts are necessary, and when the fistula is complicated, it may require several months for healing. Occasionally, a fistula will pass through the fibres of the sphincter muscle, and when the overlying fibres are cut the wound will fail to heal, on account of the contraction of the remaining fibres. In this case, the muscle should be cut entirely through and put at rest. Before operating on a horse-shoe fistula, it should be thoroughly explored, and its conformation well understood. Unless this be done, the condition may be mistaken for two or more distinct fistulæ, and if the operation be done with this impression the sphincter will be cut in several places and the patient will probably suffer fœcal incontinence. If the fistula can be treated with one incision of the muscle at a right angle to its fibres, there will be little risk of incontinence.

This form of fistula usually has its internal opening in the median line posteriorly. The operation is done by introducing the probe director into this internal opening and incising back to where the fistula branches, then the director is introduced into the external openings and passed to the posterior incision and the overlying tissues divided. By this means the sphincter muscle is cut at one point only, and its fibres divided squarely across. If the two external openings are for enough

back for a straight line between them to pass behind the sphincter muscle, this sinus may be opened first and then the dorsal incision into the bowel can be made from the transverse incision. When the over-hanging edges of skin are unhealthy, they should be cut away with scissors. In all cases in which the skin-flap prevents free drainage, it should be cut away.

In a simple fistula with a small amount of pyogenic membrane the fistulous track may be cut entirely out, and the wound stitched up, just as in repairing the perineum, but this should not be done, except where a perfectly clean wound can be obtained. When operating on tubercular subjects, the sphincter muscle should be avoided, if possible, and the patient should not be kept in bed but a few days, if able to get out into the fresh air. These cases also require constitutional treatment. They should have plenty of easily digested and nutritous food, as well as, constitutional remedies, to build up the general strength.

DISCUSSION.

Dr. W. W. Harper said: I see Dr. Furniss present, and knowing that he has had much experience in the treatment of fistula-in-ano, I would like to hear from him.

Dr. Furniss replied that the paper presented by Dr. Tally had so thoroughly covered the subject that he had nothing to add to it.

Dr. Harper then related the history of a case that had fallen under his observation.

Dr. Mack Rogers said: I wish to call especial attention to the careful examination and diagnosis that is so necessary in these cases.

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tions of rectal troubles and hence they overlook troubles of a grave nature, and allow them to go undetected and untreated. A positive diagnosis is absolutely essential to rational treatment.

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Three forms of the disease are recognized: 1. Catarrhal. 2. Ulcerative. 3. Membranous.

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In the Membranous variety, there is an exudation of

fibrin that not only coagulates upon the inner lining of the intestines, but actually infiltrates this membrane.

SYMPTOMS.—While the pathologist recognizes three forms of the disease, clinically, there is only one. The onset is usually sudden, with vomiting, and stools, varying in frequency from 5 or 6 to 20 or 30 in the 24 hours. At first, these stools are composed of fermenting and undigested food, but in a day or two fœcal matter disappears, and we have the characteristic action, mucus and blood, with lumps of casein. Every action is preceded by pain and accompanied by tenesmus. This pain is sometimes so severe that I have seen patients awaken with a cry. Where the tenesmus is marked, we usually have a prolapse of the rectum. The discharges are green in color, acid in reaction, and exceedingly offensive in odor. In the Ulcerative form, shreds of necrotic tissue are found in the dejecta and the odor is that of gangrene.

The characteristic of the third type is the appearance of the membrane in the stool, but, even here, what often appears to be a membrane is, upon microscopical examination, found to be mucus. This form of the disease is not common. The abdomen is tender and tympanitic. I have seen this distension so marked that it not only embarrassed respiration, but actually threatened rupture of the intestine. The temperature runs a more or less varied course. In the mild cases from 100° to 101°, in the morning, to 102° and 103° in the evening; in severe cases, higher. However, the temperature is not an accurate index of the pathologic changes, for, some of the most extensive lesions have been found in cases that have had a low temperature; while, with a high temperature few anatomical changes have been observed. (Holt) Not infrequently, cerebral symptoms are prominent; convul

sions may be persistent, and are often the fore-runners of stupor and coma. Deepening stupor sometimes develops without convulsions. Emaciation is rapid and, in prolonged cases, the patient acquires "the facies of an old woman." The duration of mild cases is from two to four weeks. Convalescence is slow and relapses frequent. The most dangerous complications are acute pseudo-hydrocephalus and broncho-pneumonia.

DIAGNOSIS.—We are to differentiate from acute gastro-enteric infection, typhoid fever, cholera-infantum, and intussusception.

In acute milk-infection, the temperature is higher and lasts only a few days. The stools are frequent, and free from mucus and blood. There is no tenesmus. A more regular temperature, with a macular eruption upon the abdomen, serves to distinguish typhoid fever. Besides, typhoid fever is rare under two years, while enterocolitis is a disease of the first year or two, (Holt). Persistent vomiting, serous stools, excessively high temperature, with rapid and marked prostration, serve to distinguish cholera-infantum.

In ileus, the diagnosis rests with the history of the case. Until the later stages of intussusception, when peritonitis develops, there is no temperature. At this stage, the diagnosis is made clear by the persistent stercoraceous vomiting. Most works on pediatrics speak of the abdominal tumor in invagination, but, with a tender and tympanitic abdomen and a crying baby, practitioners will, most generally, experience some difficulty in finding this tumor.

The prognosis depends in large measure upon certain conditions. Attacking breast-fed and robust infants, and those under healthful surroundings, the majority of cases will recover. Occurring among foundlings, and babies in tenement houses, the mortality is

frightful. The artificially reared city baby is in great danger, unless taken to the seashore or country. The prognosis is unfavorable, if the child is attacked early in the summer. Unless removed to the country and kept until cool weather, the infant usually perishes from a second or third attack.

Broncho-pneumonia and brain involvement are exceedingly dangerous complications.

Much can be done in the way of prophylaxis by educating mothers and securing much needed legislation. Mothers should be urged to nurse their babies, and where that is not possible a wet nurse should be secured. If breast milk cannot be obtained, good fresh cow's milk, properly modified and sterilized, should be substituted. This milk should come preferably from a herd. The proprietary foods should not be entirely depended upon as substitutes for milk. Mothers and nurses should be carefully taught how to prepare the feedings, the care of bottles and nipples, and the disposal of napkins. It is a common belief among the laity that during dentition diarrhœa is a physiological process, but they should be taught that every case of diarrhœa occurring in the summer, especially, needs prompt attention. In large cities, when the diarrhœa does not improve in a few days, the patient should be taken to the seashore or the country, and kept there until cold weather. The baby should be given plenty of cool sterilized water, and its diet should be liquid.

TREATMENT.—Dietetic. All milk should be stopped at once and withheld from 36 to 72 hours. It is claimed that these germs thrive best on milk and soon die if the milk diet is discontinued. If there is much nausea, the stomach should have absolute rest for from 12 to 24 hours. As soon as irritableness subsides, in lieu of milk diet, give albumen, rice and barley water,

and coffee. When beginning a milk diet again, the time between nursings should be lengthened, and the time of nursing shortened. If using cow's milk, the milk should be well diluted, partially peptonized and pasteurized. Sir Wm. Roberts has called attention to the fact that milk should be only partially peptonized and the peptonizing discontinued as soon as the emergency is over, as, it is better for the digestive organs to perform their functions. All cow's milk should be either pasteurized or sterilized. When milk is sterilized it is altered in taste and the casein rendered more difficult of digestion. Flugge has shown that most pathogenic bacteria are killed at a temperature of 150° to 160° F., but the spores are not. Hence, after pasteurizing the milk it is necessary to keep it on ice to prevent the hatching of these spores. Among the poor, it is safer to boil the milk. Prof. Czerney advises boiling for ten minutes. According to the researches of Freeman, when milk is allowed to stand until the cream rises, a separate analysis of the milk and cream will show 99 % of the bacteria to be in the cream; thus leaving the milk comparatively sterilized. He says "the practical bearing of this observation is important. If heating milk to 155° F. is injurious to it as an infant's feed, the bulk of the bacteria present may be separated from the milk by allowing the cream to rise, and then pasteurizing or sterilizing the cream and afterwards mixing it with the comparatively germ-free raw milk." Prof. Czerney claims that the prolonged use of sterilized milk produces scurvy. Sonnenberg calls attention to the very important fact that in sterilizing milk we kill only the bacteria which are present, but do not render inert the toxins which they may have already generated, and it is, therfore, necessary to sterilize the milk before these last changes take place.

MEDICINAL.—The indications are to clear the gastro-intestinal tract of its mass of fermenting food. For this purpose there is nothing better than a good dose of castor oil. If the stomach is too irritable to retain the oil, give $\frac{1}{8}$ of a grain of calomel every twenty or thirty minutes until one to three grains, according to age of child, are taken.

Realizing that the principal seat of the disease is in the last two feet of the ileum and in the colon, I protest against the use of the soluble antiseptics. They are of no use, but do positive harm by upsetting the stomach and interfering with digestion. If given strong enough to act as germicides, they would kill, or put into abeyance, every one of the digestive ferments.

I also desire to caution against the use of powerful astringents, which are likely to arrest intestinal movements too quickly. Salol has many advocates, but it is not a safe remedy; cases of poisoning from it being frequently reported. Some practitioners have obtained excellent results from small doses of resorcin. Sonnenberg calls special attention to the tanalbin preparations, claiming that they form inert chemical compounds with the toxins generated in the intestinal tract. The remedy which has given me the most satisfactory results has been large doses of bismuth, and as the dejecta are usually acid in reaction, I give the bismuth suspended in chalk mixture. To be beneficial, the bismuth must be given in large doses, ten to twenty grains, according to age, every two or three hours. The bismuth should not be given for too long a time, as it frequently forms concretions in the bowels which act as irritants. Every four or five days it is well to give a dose of oil or calomel.

As to the use of opium, it seems to me that there are three special indications; first, pain; second, watery actions; third, very frequent discharges, showing the intestinal contents to be hurried along too fast for their proper digestion.

The opium should be given alone, and discontinued when the special indication has been met. The contra-indications are: cerebral involvement and offensive stools.

Along with these medicinal agents, irrigation of the colon should be resorted to once or twice a day. The only apparatus necessary is a fountain syringe and a large rubber catheter. For simple irrigating purposes the water should be tepid, and from two to four quarts used each time. The baby should be placed upon its back with hips elevated. Having oiled the catheter it should be introduced into the rectum, which may be slowly distended with water, then, the catheter can be readily introduced its full length into the colon. As the colon fills with water peristaltic action forces the water out along the side of the tube. Unless the rectum is first distended with water, the end of the catheter catches in the rectal valves and it is with great difficulty that the tube can be introduced into the colon. This colon irrigation serves not only to flush out effete matter, but, by substituting cold for tepid water, it is an efficient measure for reducing high temperature and relieving nervousness. By using very warm water, we can relieve shock and depression.

Stimulants should be given from the outset, using preferably the best quality of whiskey; from one to three ounces, well diluted, should be given in the 24 hours.

For tympanites, use hot turpentine stupes, minute

doses of calomel, and change from a milk to an albumen diet; also, use prolonged colon irrigation. I recall the case of a child that was comatose, and it seemed as if the colon would burst. After using two or three gallons of water, flatus began passing, the distention was relieved, and the child recovered. When restlessness is due to pain, an opiate is to be given. When the opiate is contra-indicated give small doses of phenacetine. If the restlessness is from high temperature, nothing is so quieting as the use of baths and sponging. On many occasions, I have seen infants put to sleep by simply placing them on a bed and gently fanning them. Bromides by mouth or rectum are most useful and simple, as sedatives.

When the temperature does not exceed 102°, antipyretic measures are not needed. For the higher temperature, we should not use any of the carbon group, but rely upon baths, sponging, and colon irrigation. The bath should be about 98° and quickly cooled to85° or 80°. The child's temperature should be frequently taken and it should be removed from the bath upon the appearance of cyanosis, or when the temperature reaches 101°, remembering that the temperature will fall a degree or two after removal from the bath. The duration of the bath should not exceed 10 minutes. A crying baby will often go to sleep in the bath. A pale skin and cool extremities are contra-indications to the bath.

Upon evidence of brain irritation, apply an ice-cap and give the bromides freely; also, chloral guardedly.

Within the past few years there has been brought to the notice of the profession a remedial agent, which promises to have a wide field of usefulness. I refer to the subcutaneous injection of the normal sterile salt solution. Its indications in ileo-colitis are: 1. To relieve the prostration; 2. To prevent threatened acute

pseudo-hydrocephalus. 3. To wash, as it were, from the tissues the toxins of the disease. 4. To act as a hydragogue diuretic. Upon these latter points Halstead says that he has seen a most rapid toxæmia from renal insufficiency quickly relieved by hypodermoclysis. In giving the injection he says: "a graduated fountain syringe is perhaps the best instrument for the purpose, an elevation of about four feet above the patient being sufficient. A half hour or more may be taken for the injection, the patient sometimes falling asleep while it is being made." He "cautions against giving the infusion of salt solution too rapidly, for, the tissues may be damaged by it, and annoying, and even serious, consequences may result." He cites "two cases in which gangrene followed the too rapid or too forcible injection of the solution. In both instances, considerable force was exercised and the injection was in neither case discontinued until after a large, perfectly central area, surrounded by a livid zone, had been produced."

In conclusion, I desire to call your attention to an agent yet in the experimental stage, but one which, I believe, is destined to play a most conspicuous part in the treatment of the summer diarrhœas of infants. I speak of liquid air. If it be true that these diseases are due to germs that do not multiply and disseminate at a temperature below 60° F. is it not highly probable that the diseases will be arrested by artificially producing a temperature in the room or house below that point? As soon as liquid air can be manufactured cheaply enough for commercial purposes, I believe that there is in the therapeutic use of it a field for experiment that may prove of lasting benefit to generations yet unborn.

DISCUSSION.

Dr. W. G. Harrison said: I warmly endorse the paper

just read, and, especially, the recommendation of the use of the normal salt solution in entero-colitis of infants, as in many other conditions. This therapeutic measure, I believe, possesses great merit, and is susceptible of wide application. Recently, I employed it in a case of eclampsia which I had bled profusely and, I feared, too much. The use of the warm salt solution quickly restored my patient. I have used it in the vomiting of pregnancy, with good results.

The paper appeared to be able and exhaustive.

Dr. Tally said: I agree entirely with the author of the paper as to withholding milk from infants suffering from entero-colitis, when there is milk infection.

In these cases cool baths may be administered with advantage; they answer both as antipyretics and sedatives. I do not give opium in these cases. Calomel, cool baths, and rectal flushing constitute, in my opinion, the most important therapeutic measures. Recently, I treated a case of entero-colitis by cool baths with decided advantage; the child was kept in the baths much of the time for forty-eight hours.

Dr. J. M. Whiteside asked whether the author meant, by recommending the withholding of milk, to withdraw *breast* milk, when the child was being nursed in that way? Such infants are not so often affected as those artificially fed, but they are sometimes. He said that he employs rectal flushing in these cases, and flushes out the stomach, by introducing a stomach tube.

Dr. Harper, in closing the discussion, said that he withdraws milk, even when the child is nursing from the breast. Germs thrive in milk, consequently, it must be withdrawn, although it be breast milk.

Dr. Harper spoke of the wide range of usefulness of injections of normal salt solution.

DIFFICULT LABORS AND THEIR MANAGEMENT.

By Thomas Edmund Dryer, Huntsville.

Junior Counsellor of the Medical Association of the State of Alabama.

Difficult labors occur in the second stage, and the causes may be divided as follows:

Those relating to the mother are:

1st. Exhaustion, from tedious labor,

2nd. Want of uterine force, or inertia.

3rd. Rigidity of the perineum.

4th. Uterine tumors.

5th. Deformities of the pelvis.

Those relating to the child are:

1st. Ossification of the head.

2nd. Preternaturally large head.

3rd. Monsters.

4th. Mal-presentations.

5th. Mal-positions.

The most frequent of the above causes are: Uterine inertia, rigidity of the perineum, and occipito-posterior positions. I shall take up each cause, as classified.

First, Exhaustion. If the presentation and position are good, the head not too long impacted in the bony pelvis, give a hypodermic of morphia and atropia, thereby stopping the pains and causing the patient to sleep several hours. You may then look for a favorable termination of labor, or, if advisable, forceps may be used.

In uterine inertia, we should not delay in the use of the forceps, for if the forceps are properly adjusted and traction made in the right directions there is no danger to either mother or child.

We find rigidity of the perineum most frequently in primiparæ. In treating these cases we can frequently obtain good results from heat, applied to the perineum, or, placing the woman upon her side, we can stretch the perineum by introducing two fingers into the vagina and pulling toward the coccyx. We may not accomplish our object by these means, then, the only thing to do is to use the forceps. With the patient well under the influence of chloroform, we should deliver slowly, making traction at intervals, as, there is danger of rupturing the perineum.

Uterine tumors are so seldom met with it is not worth while to discuss them fully, but should the tumor be so large that it interferes with the forceps delivery, it should be enucleated. Pedunculated tumors are generally so small they do not interfere with labor.

Deformities of the pelvis are so numerous I will not attempt to enter into a description of them. The treatment is symphysiotomy or Cæsarean section.

Ossification of the fœtal head is a complete, or nearly complete, closure of the fontanelles. As there can be no yielding of the head, attempt delivery with the forceps; if the attempt prove futile, the child should be delivered by symphysiotomy. Cæsarean section, or craniotomy, should be performed, if the interest of the mother is to be consulted. The only course to be pursued with preternaturally large heads is delivery with the forceps.

The natural forces are sufficient to deliver monstrosities.

Under the head of mal-presentation, we have transverse and brow. Transverse presentation, when seen

early by the physician, can be remedied by introducing two fingers into the vagina, or the whole hand if necessary, and while pushing up the breech with the fingers of the internal hand, push down the head with the external hand. It has been my misfortune to be called by midwives to five cases of this kind in the past few years, but not until the hand had protruded from the vulva and had been in this position for several hours. The last case seen was in consultation with another physician, he having been called by a mid-wife. The woman had been in this condition two days. When we find such a condition of affairs the only thing to be done is to completely chloroform the woman, introduce the hand, grasp the feet, turn, and deliver. All these women recovered except the last case mentioned; she died the next morning. Of course none of the children lived. In brow presentations the head occupies a position intermediate between flexion and extension.

A brow presentation, occiput anterior, if not converted into an occiput presentation, cannot be delivered naturally. The treatment should be to introduce the hand, grasp the occiput and flex the head, retaining the hand in this position until the head is impacted in the bony pelvis. Were we to convert this into a face presentation we would have a mento-posterior, which is also impossible to deliver. When the brow presents with occiput posterior, were we to flex the head we would have occipito-posterior position, which we know is a very troublesome one, so, we must extend the head and make a mento-anterior position. After we have made the manual manipulations we can use the forceps, if necessary. We can also make use of podalic version in these cases.

Mento-anterior positions are not now looked upon with so much dread as by the older writers, as they are

practically devoid of danger to mother or child. If delivery be too long delayed, forceps can be easily used.

In mento-posterior positions the condition is more serious. This presentation and position can be converted into an occipito-anterior position in the following manner: The woman should be thoroughly anæsthetized, the hand introduced into the vagina, the fœtus pushed up above the pelvic brim, and with external hand pressure should be made upon the head of fœtus, so as to cause flexion. When the head descends there will be an occipito-anterior position. This procedure should be tried before embriotomy or Cæsarean section is practiced. Of course these presentations can be remedied much more easily before escape of the liquor Amnii.

Occipito-posterior positions are met with much more frequently than any other, consequently we have to deal with them oftener. From this cause we have very protracted labors; should the child be born without assistance labor is sometimes lengthened for many hours. Many times, after waiting, the forceps have to be used, but if the condition is recognized early, that is, before rupture of the Amnion, an occipito-anterior position can be obtained by external manipulation, but should the patient seem well-advanced in the second stage, the question arises: what should be done before using the forceps? Every obstetrician agrees to the use of two fingers to side of head for the purpose of causing rotation, but, should this fail, we must then proceed as with a mento-posterior position, that is, anæsthetize the patient, introduce the hand, raise the fœtus and the lower portions of the uterus above the pelvic brim, make rotation by turning the head with internal hand, and, at the same time, grasping the shoulders with the external hand, turn the body of the fœtus. Parry, who was the first to

give an accurate description of this procedure, says, "When the woman is entirely relaxed by the anæsthetic, it is surprising what can be done by pushing the head upwards; not only does the child ascend, but if the lower portions of the uterus have been carried with the head into the cavity of the pelvis it may be lifted with its contents above the pelvic brim, when the latter becomes movable and easily manipulated. Both in the pregnant and unimpregnated woman the degree of stretching and movement of which the generative organs are capable, when patient is completely anæsthetized, appears very remarkable to one who has never employed this agent in such cases. Always use chloroform, as it produces greater muscular relaxation than ether."

In breech presentations we have a very slow labor. If the complete breech present it is better not to bring down the feet, but we must use every effort to prevent the arms from being extended and to maintain flexion of the head. Both of these may be accomplished by pressure. Make supra-pubic pressure upon the head, in order to keep it flexed, except when the occiput rotates in the sacrum, then, we must have extension, so that as the occiput passes over the pelvic floor the chin may pass under the pubic bone. The after-coming head may be delivered with proper traction, or by the forceps.

In knee or foot presentation the management is about the same as in breech presentation, but in delivering the legs we may have made enough traction to cause the arms to extend, and if such be the case we must, by introducing the hand into the uterus and by a method of flexion, bring down one arm after another. In either breech or foot presentation the cord is subject to pressure and we must attempt to deliver as quickly as possible the after-coming head.

DISCUSSION.

Dr. P. G. Trent said: I thank the author for his paper. The subject on which it treats is one that from time to time confronts all practitioners, and often causes much anxiety and trouble.

In difficult labors I administer chloroform in capsules by mouth, accompanied by the free drinking of of water. Chloroform administered in this way seems to do good. In difficult and tedious labors I also use lubricants to the parts freely, and for this purpose I prefer to all others good home-made lard.

When the parts get hot and tight I introduce lard very freely and find benefit from it.

Dr. Dryer, in closing the discussion, endorsed the use of lubricants, and thinks they are of service in natural labors when the vagina is hot and dry.

CHRONIC MALARIAL POISONING.

By Henry Altamont Moody, M. D., Bailey Springs,
Senior Counsellor of the Medical Association of the State of Alabama.

The doctor whose lot is cast in the cotton-growing States of America is frequently called upon to prescribe for conditions which, though varying widely in their phenomena, are grouped under the comprehensive name of chronic malarial poisoning, or, more briefly, chronic malaria. The term is so convenient, and the phenomena are so varied, that no doubt it is often misapplied, or used as a cloak for ignorance of the true pathology of obscure conditions. It sometimes happens that a train of symptoms devoid of periodicity, jaundice, or splenic enlargement, after running the gauntlet of pepsin, iodides, tonics, and alteratives, yields to a few doses of quinine, thus, according to modern conclusions, demonstrating the malarial origin of the disorder.

It is therefore difficult to define exactly the meaning of the term, chronic malarial poisoning. Equally impracticable would be an attempt to fully describe the Protean disguises assumed by symptoms originating in malarial infection.

The object of this paper is to consider some of its most commonly recognized phenomena in the light of modern pathology, and see wherein the accepted teachings concerning the organisms known as malarial parasites correspond with or explain established clinical observations. The forms of chronic malarial poisoning most

commonly recognized are, chronic, recurrent chills, and chronic, irregular oscillations of temperature without chills.

Both conditions are characterized by anæmia, and enlargement of the spleen. Other deviations from the normal may or may not be found. Chronic malarial poisoning is usually a result of acute malarial attacks, though such is not always recognized as the case. Generally remittent or intermittent fever of greater or less intensity is the forerunner of the cachexia. But sooner or later the patient, unless relieved, reaches a stage when the hour of the day or the day of the week or the interval elapsed since the preceding paroxysm seems to bear no relation to succeeding chills. Several days may pass without one. Then daily paroxysms occur. It is quite common for the sensation of cold to be protracted and severe, while the succeeding fever is slight and of brief duration. On the other hand sometimes the chill is almost imperceptible, while the fever is the principal manifestation. The patient is anæmic, nervous, frequently jaundiced, and almost invariably has an enlarged spleen. Sometimes after a respite of one or two weeks the sufferer is notified of an approaching attack by a sensation of increased vigor and well-being, in which the appetite shares. An intelligent physician who suffered from chronic recurrent malarial paroxysms for several years told me that he finally learned to anticipate a coming chill by recognizing this euphoria, and fortifying against the attack with quinine. The other form of chronic malarial poisoning, characterized by derangement of temperature without recognized chills, is more difficult to relieve than those displaying periodicity.

The patients are generally more anæmic, their complexions are more sallow, the skin feels dry and tough,

and the spleen is frequently very much enlarged. In many cases the liver also shows considerable hypertrophy, and often the urine contains albumen. Dropsical effusions into the areolar tissues of the inferior extremities are not uncommon, and in severe cases ascites is a troublesome and obstinate complication. A drop of blood examined under the microscope shows great poverty of red corpuscles, of which four-fifths of the proper number may be missing.

The phenomena described first, and often denominated recurrent chills, can generally be corrected by a persistent and systematic administration of quinine. If there is a regular period it can be forestalled, and the paroxysms averted. But to prevent their return the remedy has to be administered on the sixth and seventh, thirteenth and fourteenth, and twentieth and twenty-first days. The other form will not yield to quinine alone, and sometimes persists for months in spite of the routine treatment prescribed by our books. The phenomena of both conditions are ascribed to malarial poisoning for the following reasons: They are seldom seen except in patients who have been exposed to malarial infection; they are most common immediately after the time of year when malaria is most intense in its effects; and they frequently succeed acute attacks.

In view of these circumstances the question arises: Do observations of the malarial parasites reveal anything in their habits or products to account for the conditions described?

In order to answer this question it is necessary to briefly consider what has been discovered concerning this interesting but troublesome parasite. I will not inflict upon you a list of investigators and their writings. They are very numerous, and their ranks are recruited

from every civilized nation. I will endeavor to present some of the results of their investigations, clothing them in language as free as possible from technicalities, and will strive to be as brief as lucidity of expression will allow.

We are taught, then, that there are four distinct varieties of the plasmodium malariæ. They differ from each other in size, in the time required for their cycles of existence, in the forms they assume and in the gravity of the symptoms they cause.

They are distinguished principally according to their life cycles. Thus the quartan parasite has a period of three days, the common tertian a period of two days, the quotidian matures in twenty-four hours, and the æstivo-autumnal or malignant tertian matures within forty-eight hours. The common tertian and the quartan are most prevalent in winter and spring, the malignant tertian and the quotidian in summer and autumn. The winter and spring parasites are very mild in their effects, and though they may cause anæmia by their destruction of the red blood corpuscles, if permitted to continue a long time, yet we are told by Marchiafava that they never cause a malignant form of chill or fever. Indeed, he indicates that though prone to recurrences they have a tendency to ultimate recovery, when left to themselves. These winter and spring forms are very susceptible to the effects of quinine, and are easily cured. But when we study the characteristics of the summer-autumn parasites, especially the malignant tertian, the case is different. These parasites are very refractory to the influence of quinine, and produce malignant forms of fever, often fatal in character.

The home of the plasmodium malariæ is in the interior of the red corpuscles of the blood, the normal diameter of which is about one three-thousandth of an inch. The

imagination refuses to convey an idea of such diminutiveness to the intelligence without the aid of comparisons. It is estimated that lying edge to edge it would require ten millions of them to cover a square inch. Thousands of them could be piled on the head of a pin. Three thousand, lying side by side, would hardly measure an inch in length. In the heart of these minute bodies the malarial parasites find shelter and food, and pursue the round of their growth and propagation. Whence the parasite comes and how introduced into the human system is not yet fully determined. Of course we have all heard of the mosquito theory, and no one will deny the possibility of infection from such a source. But few of us are yet prepared to believe that the mosquito is the only source of invasion, or even the one most frequently responsible for it. One or two facts seem to militate against the theory. In the first place it is stated that the Anopheles, the only poisonous variety, bites only at uight. As the parasite has a life-cycle of twenty-four, forty-eight, or seventy-two hours, it would seem reasonable to look for the paroxysms at some multiple of twenty-four hours from infection, which would consequently be in the night time. But we all know that malarial paroxysms are seldom seen in the night, the vast majority occurring between nine in the morning and three in the afternoon. Then, too, it would seem strange that the insect should so time his depredations that double infections should occur so symmetrically. And finally we often see a tertian suddenly assume the quotidian form without any opportunity for fresh infection. Of course it is understood that such theoretical objections may easily be met by other theoretical suggestions, but the question must be considered as still *sub judice.*

Once introduced the parasite bores its way into a red blood corpuscle and makes itself at home. It is then that the different varieties cause different results. The quartan parasite grows slowly, has but slight power of motion, and when fully grown is motionless. It then occupies the entire interior of the corpuscle which either disappears entirely or is represented by a thin colored circle surrounding the parasite. It has been devoured by its guest. The parasite proceeds to digest its meal, and the resulting fœcal matter appears as dots of dark pigment inside the plasmodium. In the quartan this pigment accumulates in the center. As the organism approaches maturity scallops appear around its edges, and radiating lines run from the center to the notches of the scallops, thus marking the parasite into segments from six to twelve in number. Two or three hours before the chill these daisy-shaped plasmodia split up into as many pieces as there are segments. Each segment shows a little nucleolus, and is a perfect spore, ready to attack a fresh blood corpuscle and enter upon another life-cycle of seventy-two hours. During this sporulation the thermometer will reveal more or less elevation of temperature, and soon after the release of the swarm the patient has a chill, then a fever, then a free perspiration. Then, if he carries but one set of the parasites, he is troubled no more for two days. On the third day, at the expiration of the seventy-two hours, millions of parasites burst from the destroyed blood corpuscles, split up into ten times their number of spores and swim about in the blood stream to attack a new series of corpuscles; and the patient has another chill. The division of the parasite into spores turns loose into the blood stream the accumulated fœcal matter, which can be plainly discerned as dark rods and specks floating in the liquor sanguinis,

and the white blood corpuscles proceed to pick them up and carry them away. There is every reason to believe that when the coating of the destroyed corpuscles is torn to allow the exit of the plasmodia, there is also discharged into the blood some form of poison secreted by the parasite, a toxin which powerfully affects the nerve centers controlling heat and secretion. It is probably the case that the different varieties of the parasite secrete poisons of varying virulence, and that this is the reason for the difference in the results of infection with different varieties. With every paroxysm countless millions of destroyers are precipitated upon the helpless red blood corpuscles, and a chill follows; till these oxygen carriers become so few that they are scarcely able to perform the functions necessary to continued vitality. The starving nerves cry out for oxygen, and the heart, endeavoring to respond, labors violently to send the impoverished stream more swiftly on its way. The lungs are ordered to exert themselves, and the patient breathes rapidly and with labor to present a flow of oxygen to the few remaining corpuscles. The mucous membranes lose their pink color, and the muscles respond but feebly to demands. Then we say the patient is weak, anæmic, short-winded, and has palpitation of the heart. A peculiarity of this quartan parasite seems to be that a whole generation sporulates at the same time. They do not "fire by file," but "by vollies," at intervals of seventy-two hours. A patient may be infested with two different generations of quartan parasites. In such a case he will have two chills on successive days and then miss a day. We often see patients whose chills come one day at, we will say, ten o'clock A. M., the next day at two P. M., and the next day there will be no paroxysm. Then on the third day the ten o'clock chill

returns, and on the following day the two o'clock one, and so on. In such a case, the double quartan infection is evident.

This parasite is more regular in its cycle of development than are the other varieties of plasmodia, and for this reason has been more fully described in this paper than they will be. If you draw a drop of blood from the finger tip or lobe of the ear of such a patient and place it properly upon a warm slide your miscroscope will show the parasites very plainly.

If they are small and show amœboid motion your patient will not have his chill that day nor the next. If they are motionless and large, filling the whole corpuscle, but do not show lines radiating from a dark center to a scalloped periphery, your patient will not have his chill that day. If they have dark centers, scalloped edges, and radiating lines, they are about to sporulate, and a chill is imminent. This is the time when quinine is most efficient.

The parasite is most exposed to its poisonous influence when swimming free in the blood stream. It is not then protected by the coating of the corpuscle. Thorough quinization will generally prevent the development of any further generations from that family of parasites, but will not save the patient from the impending chill. The reason is plain. The quinine is given in anticipation of the expected chill. The parasites are within the corpuscles, partly protected by them and partly by their own envelopes. They sporulate in spite of the quinine, their poison is diffused throughout the system and the patient has a chill. But, when the innumerable spores go swimming about in the blood-stream, seeking to enter fresh red blood corpuscles, they find the plasma poisoned with quinine, from which they have no protection. They weaken and die, and no further paroxysm follows.

Meanwhile we continue to administer quinine for a day or two, any belated stragglers are met and destroyed, and the patient is cured. Such is the history of the quartan infection. It seldom causes continued or sub-continued fever, and when such is the case it is probably because of the presence of numerous generations of the parasites, maturing in succession, and resulting from different infections. In two such cases Antolisei found parasites in all the stages of development in the same preparation. The tertian parasite is distinguished from the quartan:

1st, by the life-cycle, which is forty-eight hours, instead of seventy-two.

2nd. It is much more active in its amœboid movements, putting out a protection, now here, now there, and plowing up the substance of its host ruthlessly. This results in the more rapid discoloration of the corpuscle, which also swells and becomes larger than natural.

3rd. The number of spores into which the tertian parasite divides is greater, being from fifteen to twenty.

4th. The shape of the spores is round and globular, instead of long or oval as in the quartan.

5th. There is a different disposition of the fœcal pigment dots. As the parasite grows its amœboid movements diminish, but the dots of pigment swirl hither and thither like a swarm of gnats, showing the rapid motion maintained within the organism. It may finally occupy half or two-thirds of the corpuscle, but seldom or never the whole, as does the quartan form. Finally, just before the sporulation of the parasite, the pigment collects in a mass which may occupy any position, instead of being always central as in the quartan form.

At the end of forty-eight hours, its life-cycle being complete, it bursts through the containing capsule of the corpuscle and, in the form of globular spores, seeks

fresh corpuscles to devour. The specific poison it has secreted is liberated and diffused, the nerve centers respond to its influence, and the patient has a chill. One important fact must here be mentioned. Sometimes in a case of typical tertian infection a drop of peripheral blood, such as that taken from the ear or finger, will fail to show the parasites. In such cases a drop taken from the spleen will demonstrate their presence; and often the presence of pigment granules in the bodies of the scavenger leucocytes will betray the infection when the parasites themselves are not demonstrable. It is in this form of common tertian that the so-called flagellated bodies are seen, amœbæ with streamers that lash and wave vigorously. As their significance is not yet determined they are only mentioned in passing.

This tertian parasite presents some irregularity in its cycle of development so that sporulation continues through two or three hours, and the fever is correspondingly prolonged. A double infection may excite a daily paroxysm, and is the most frequent cause of our everyday chills. When several generations of this parasite are in the blood an irregular continued fever results.

This form of parasite readily yields to quinine.

The third form to be considered is the quotidian. It prevails during the summer and autumn. It is characterized by the absence of pigment, and by its ring-like shape. This ring attaches itself to the side of a red blood corpuscle and seems to encircle it. The corpuscle is destroyed, and the parasite sporulates within twenty-four hours. Its presence is accompanied by the appearance of numerous crescent-shaped bodies, like imperfect rings, swimming in the blood. The poison secreted by this parasite is virulent, producing a condition of depression out of all proportion to the violence of the

fever. Mannaberg tells us that the patients as a rule complain less of heat and cold than of headache, pain in the limbs, diarrhœa, vomiting, and weakness. They frequently appear to be very ill; the weakened condition of the organism generally continues after the period of fever; convalescence follows very slowly, and is often interrupted by relapses of fever. In fact, the fever is of a malignant character and often proves fatal, in spite of the early and energetic use of quinine."

The fourth variety is the malignant tertian. Its period is forty-eight hours. It contains many pigment cells, and maintains active amœboid movements, even when nearly ready to sporulate. It is quite large and occupies about two-thirds of the space of the containing blood corpuscle, which, when attacked, shrivels and becomes smaller, instead of becoming larger, as it does when infected with the common tertian parasite. This form also produces crescents. The fever caused by a single generation of this parasite lasts, as a rule, from twenty-four to thirty or forty hours, showing characteristic oscillations during its continuance. Consequently, the stage of apyrexia is very short. A double infection results in an irregular continued fever of malignant character.

The parasites are most numerous in that part of the capillary network where the lumen is smallest, and are often found in the vessels of the brain and spleen when they cannot be detected in peripheral blood. In comatose cases the capillaries of the brain are sometimes found to be literally choked up with corpuscles. They seem to have a tendency to adhere to the vessel walls, thus forming an obstruction to the circulation that results in complete stoppage. The marrow of the long bones seems also to be their favorite retreat, which

explains the excruciating pain in the limbs of patients with malignant fever.

I have presented this summary of what is known concerning the malarial parasites in order that we may look at the chronic conditions following malarial infections from a standpoint in harmony with modern discoveries.

Before leaving this part of the subject there are some interesting facts that should be mentioned, as they may have a bearing upon some of the phenomena of chronic malaria. Marchiafava and Bignami tell us that sometimes in malignant cases, in spite of the energetic use of quinine, the disease continues, or even progresses to a fatal issue. The parasites disappear from the peripheral blood, but after death are generally found in the cerebral vessels and the spleen.

"But," and I quote their words, "there are cases in which all the viscera contain but a scanty number of parasites, or they may even have *entirely disappeared.*"

Another circumstance mentioned by the same authors is that the malarial parasites found in the blood of birds are not killed by quinine. Roque and Lemoine tell us that the urine of malarial patients is much more poisonous to rabbits than that of persons not thus infected; and Queirolo informs us that the sweat of such patients injected into rabbits is fatal to them.

From these latter considerations the following conclusions are suggested: First, even after the complete destruction of the malignant forms of the parasite a fatal result may ensue, caused by some unknown but profound impression on the organism by the poison which the parasites secreted. A poison so virulent might well leave behind it results so slow to be recovered from that the phenomena would be classed as chronic, and in which quinine would be powerless for good.

Second, as malarial parasites which quinine cannot kill are found in birds, it is not improbable that similar infections may be found occasionally in man. Certain it is that some of the fevers classed as malarial are very slow to yield to quinine, and do better when the administration of that drug is suspended. Moreover, if we are to accept the mosquito theory of infection we shall have to invent a special breed of those insects, which carries only spores of the avian parasites, and never bites anything but birds. Third, the poison demonstrated in the sweat and urine of malarial patients may not disappear from the system immediately upon the destruction of the parasites, and may well play an important part in producing the phenomena of chronic malarial poisoning. Indeed, rigors, fever, sweating, diarrhœa, and jaundice, are all seen in septicæmia, as well as, in malaria.

Coming now to a final consideration of chronic malarial poisoning we are enabled, by the foregoing facts and the legitimate deductions therefrom, to account for most of its phenomena. The most constant symptom is anæmia. We know that it is caused principally by the destruction of from one-half to four-fifths of the red blood corpuscles. This alone accounts for the weakness, shortness of breath, palpitation, and, to a great extent, for any heart murmurs. The constantly observed enlargement of the spleen is explained by the fact that the parasites seem to prefer that organ as a resort, being found there when they cannot be elsewhere detected, and always more abundantly, and later in the case, than in any other region.

The peculiar sallowness of the complexion we can consider a true staining by the immense quantity of fœcal pigment matter resulting from the digestion of such a large proportion of the hæmoglobin. Its peculiar char-

acter also accounts for the slowness of its elimination. The nervous depression and languor, sometimes almost amounting to hebetude, may be due partly to the anæmia, but is probably intensified by the poison in the system; a toxin so powerful that it proves fatal to small animals when introduced into their circulation. In cases of recurrent chills we may suspect the sporulation of new generations of plasmodia whose cycle has been deferred in some way of which we are still ignorant. We only know that such deferred cycles exist in the phenomena, whether or not they pertain to the life of the parasite; for nothing is more generally recognized than the seven day periods of chronic chills, persisting through multiples of seven until twenty-eight days have passed. But there are reasons for suspecting that there are cases of recurrent chills in which the plasmodia are lacking. The old plan of keeping the patient in a warm perspiration until his chill time has passed has proved successful in numberless instances, and the significance of this fact is increased by the circumstance that chills thus broken are apt not to return. I know of no theory which can reconcile these conditions with the presence of plasmodia in sufficient numbers to cause the chills, though a satisfactory explanation may be known to others. Of course we might think the perspiration eliminated the toxin, and so averted the phenomena; but that would not destroy the spores of the plasmodia, and why do not the chills return? It is not only in chronic chills that relief can be afforded without protoplasmic poisons like quinine. Acute attacks of frank intermittents can be thus successfully treated. In 1865, when quinine was scarce and money scarcer, I saw many cases of acute intermittent thoroughly cured by the free administration of corn-shuck tea, given warm for several

hours, beginning two hours before chill time. It produced free diaphoresis, some nausea, and free diuresis, and was, so far as I could judge, as successful as the salts of cinchona, which we felt justified in reserving for remittent and continued cases. Of course corn shuck tea may contain a protoplasmic poison, but it has never been exploited. Another reason for doubting the agency of plasmodia in maintaining chronic chills is the well known fact that many such cases may be relieved by impression alone. This process presents itself for the adherence of the laity in many disguises. Sometimes it is Christian Science, sometimes divine healing, or magnetic treatment whether present or not, or magic, or hoodooism. There can be no doubt that cases are sometimes relieved by most absurd procedures. I once knew an old gentleman who had quite a reputation for charming off chills. People with obstinate cases would go to him for relief, and frequently their chills would cease to return. I became anxious to learn his valuable secret, and after a while succeeded. He told me in strict confidence that he directed his patients to go to the woods, carrying an inch auger and an inch plug. When alone and where no one could see them they were to bore a hole in a hickory tree, blow into it as many breaths as they had had chills, plug up the hole, and go home without speaking a word until they had put away the auger. This, in effect, constituted his treatment, and I afterwards learned that he had described it correctly to me. I have known other measures equally absurd to cure chronic chills, and the only explanation I could think of was that the paroxysms were simply nerve habits, left over from the powerful impression produced by the acute attacks, and that another impression might be sufficiently powerful to obliterate the first. It is not

every case that can be thus relieved. In the blood of many patients suffering from recurrent chills are found swarms of the crescent shaped bodies that have been mentioned. Observation has proved that by themselves they are not apt to cause either chills or fever, but that after awhile true parasites appear, and the chill is experienced. This suggests the possibility that there may be conditions in which the parasite remains imperfectly developed and dormant for much longer periods than are represented by its various life-cycles, but is roused to activity and regular development when its environment becomes favorable. Should such be found the case it would explain some things that are now quite puzzling. We could then understand how a case could suddenly change from a single tertian to a double tertian under circumstances precluding the possibility of a new infection; how a cycle can change to seven, or fourteen days, and how it is that sometimes after living for months in a region where malaria is unknown a patient will have a return of his chills, and be forced to take quinine. I once saw such a case have a chill nearly twelve months after leaving malarial climates.

Quinine will not always stop recurrent chills. Sometimes they return in force, despite the early, systematic, and energetic use of the drug. In such cases change of climate seems the most effectual remedy, and the treatment that was unsuccessful at home may succeed abroad. The form of chronic malarial poisoning characterized by anæmia, sallow skin, irregular rises of temperature, and absence of chills or rigors, is seldom benefitted by quinine. It is not often, however, that it escapes the trial of it. We diagnose the cases as of malarial origin, the name suggests quinine, and the drug is prescribed. After awhile we conclude that it is

not having the desired effect and we change our prescription. We also give iron and arsenic, and perhaps a little strychnine for the weak heart, but our patients improve too slowly to suit either doctors or sufferers. Sometimes the case, instead of improving, gets worse, the anæmia increases, dropsical effusions appear, the spleen and liver continue enlarged, and medicine seems powerless to relieve. Yet there are no chills, and the oscillations of temperature are irregular and present no recognized type. How can we explain such a condition? In the first place we should remember that the system is saturated with the pigment matter left by the plasmodia. The liver often presents a slaty-colored appearance, instead of its natural brown, and the spleen is discolored to an equal extent. Throughout the organism will be found deposits of this pigment in the interstitial tissues surrounding the vessels, as though the scavanger leucocytes having taken it up had crawled through the vessel walls and dumped it outside where it would do least harm. The re-absorption of this effete material for gradual elimination would render the blood plasma unwholesome, and not favorable for the vigorous growth of new red corpuscles. Other toxins, there is reason to believe, also remain as a result of the infection, poisoning the blood-stream and retarding convalescence. Under such conditions the most rational course to pursue would be the establishment of active elimination through every available channel before inaugurating the reconstructive treatment. Is there anything in clinical experience that confirms the correctness of such a course? I think many well known facts indicate its correctness.

Experience has taught us that these cases do better when they receive a preliminary course of mercurial treatment. The sixteenth of a grain of calomel, or the

fortieth of a grain of the bichloride, administered three or four times a day for two weeks, often surprises us by its beneficial results. A course of the mineral waters is a standard prescription in these obstinate cases. Too often we ascribe the resulting benefits to the mineral constituents, when it is the thorough washing of the blood by the pure water that does the work. People who live in the Mississippi bottoms have found by repeated experience that a trip to Hot Springs, Ark., and a thorough boiling out there, is a sovereign remedy for chronic malarial poisoning. After such a course they come home bleached from pigment and ruddy with new red blood corpuscles, prepared to battle another year with the inevitable plasmodia. There is no more virtue in water heated by subterranean fires than in that heated in a tea-kettle. The only advantage in sending patients to the hot springs is that there they make a business of using the hot water, while at home it would be a secondary consideration. The whole matter can be expressed in one word, *elimination*; and there can be no doubt of its efficacy. The results of modern scientific investigations and of time-honored clinical experience agree in the conclusion that the first step to be taken in the treatment of cases of chronic malarial poisoning is the elimination of the accumulated toxins. To this end, the power of the mercurials to stimulate glandular absorption and secretion, the free administration of pure water, internally, to increase diuresis and diaphoresis, and of moist heat, externally applied, to promote perspiration, constitute a triad of therapeutic agencies, always available, and seldom unsuccessful. With these, if there is any recognizable periodicity, the administration of quinine will be doubly efficient. After them, the tonic powers of iron, arsenic, and strychnine can be safely relied upon.

Change of climate, air, scenery, and general environment are undoubtedly useful adjuncts, but they are not indispensable. Elimination of the accumulated toxins, however, must be accomplished before such patients can be restored to health; and for this purpose water, internally, either cold or hot, and hot externally, is our most reliable agent. Its object is to secure profuse diuresis and diaphoresis, and when it accomplishes this, the methods of its use are of secondary importance.

In conclusion, I beg the indulgence of my audience for the multitude of omissions which must have attracted their attention, especially in the summary of investigations of the plasmodia. My excuse is that anything more than a mere reference to the broad outlines of the most important facts would be impossible within the compass of a paper to whose reading only thirty minutes can be assigned. I will only add that no more fascinating study claims our attention to-day than that of the various forms of the malarial parasite, and when, some day, we shall have entered beyond the threshold of comprehension, where now we stand, and are fully informed in the life-history of these parasites, the result will be the greatest blessing to the human race that human intelligence has ever achieved.

SOME RECENT STUDIES IN THE DIAGNOSIS AND TREATMENT OF FEVERS, WITH SPECIAL REFERENCE TO THE SO-CALLED TYPHO-MALARIAL TYPE.

By W. G. Harrison, M. D., Talladega, Ala.

Member of the Medical Association of the State of Alabama.

The Essential Fevers—those conditions where fever in some of its protean shapes remains the controlling symptom—form a large proportion of the maladies met in daily practice.

The authorities of a few years ago gave explicit and clearly defined distinctive differences between Typho-Malarial and other fevers. Some assigned to Typho-Malaria a specific etiology of its own. All of you familiar with older editions of text-books will recall the varying descriptions of this often prevalent fever. Some held that because Typho-Malaria was less fatal than typhoid that it must be due to some mysterious, benign, effect exerted on the typhoid poison by the presence of Malaria.

It is only in the white light of original scientific investigations that Typho-Malarial fever has been proven to have no existence as a separate and distinct entity.

The following review of clinical observations made last autumn will, I trust, help to clarify some of the perplexing problems in connection with these fevers. These investigations were begun, and in fact completed, with little aim other than to ascertain the causes operat-

ing in the respective cases and thereby to direct the wisest therapeutic procedures. The work was done at the bedside—far from any laboratory—during a busy season, and is of course incomplete in many details.

That I may the more forcibly demonstrate the nature of these studies and explain to you some of the difficulties in connection therewith, I will state:

1st. That the work embraces a careful observation of about 20 cases, in none of which was I able to make a positive diagnosis of Malaria or Typhoid by the usual clinical symptoms. In other words the cases were such as are popularly called Typho-Malarial fevers.

2nd. Of the twenty cases, eleven were white and nine were colored, thirteen males, seven females, youngest nine years, oldest thirty-five, average about eighteen.

3rd. Only six of the entire number were where I could procure a satisfactory clinical record. These occurred in the State Institutions for the Deaf and Blind and here I was enabled to have complete records and charts, extracts from which I will use to-day.

4th. I made something like 200 blood analyses, half as many urinalyses, and kept a close watch for all the usual symptoms and signs.

5th. In the final diagnosis I found:

12. Atypical typhoid fever.

5. Atypical malaria of the æstivo-autumnal type.

3. Combination of the two.

In discussing this matter, I have deemed it wiser to select a representative of each class rather than burden you with any effort to follow the details of every individual case.

1st. I shall speak of the Atypical Typhoid cases, and I beg your forbearance while I refer briefly to the charts, that I may the more fully entertain and interest.

W. J., W. M. A., aet., 20, from Pike county, near Troy, entered the D. & D. Institute at Talladega, Sept. 30th, 1899, good family and personal history. At 2 p. m., October 19th, was taken suddenly with severe chill, lasting two hours, followed by high fever and profuse sweat. When seen at 2:30 . found T. 102, P. 112, R. 20, chest and abdominal examination negative, tongue clean and moist, headache and general muscular soreness, urine normal, patient badly constipated, careful blood examination with 1-12 in. oil-immersion lens failed to reveal any malarial organism.

You will note (see chart) the fever in four hours had arisen to 104 4-5, 4 h'rs later, it was 104 1-5, and patient was sweating. Note temp. following day, 6 a. m. 102, 10 a. m. 103, 2 p. m. 104 2-5. It now recedes slowly and reaches at 6 p. m. 102, the same point as at six in the forenoon. Note the pulse varies from 106-126.

On the second day the diazo reaction was absent and Widalls test was negative.

Temperature, pulse, mode of onset, chill, fever, sweat, decided nausea—all led to one conclusion—remittent fever—but most assiduous search failed to discover any organism in the blood. Remembering that certain abortive cases of typhoid sometimes begin suddenly with chill and high fever, I was alert to search for rose spots, knowing that in these cases the spots are apt to appear on second or third day. Diligent search afforded nothing.

At 6 a. m. the third day, temperature 102, pulse 108—same as before; at 2 p. m., temperature 104, pulse 120. I recognized the mid-day exacerbation of remittent fever, the fast pulse and nausea of malaria, and the soft, undistended, constipated, bowel of malaria, yet, no plasmodia. Spleen and liver still unaffected; Widalls and diazo reaction still negative. Thus it continued for five days—a daily noon-time exacerbation, receding towards

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diagnosis a confidence otherwise impossible. Had

days—a daily noon time cauterization, receding

sun-set with free perspiration, and yet absolutely no microscopical evidence of malarial organism. On the sixth day I found (10 a. m.), pulse 124, temperature 103 3-5, respiration 24, (no bronchitis), no appetite, no abdominal symptoms, tongue clean and moist, no rose spots, and in fact but little evidence of sickness, except fever and nausea. Blood analysis negative, both as to plasmodia and Widalls serum test, but this time I got a very positive diazo reaction on examination of the urine. The seventh day I was so discouraged that I was almost ready to proclaim a distinct fever—free from typhoid and free from malarial elements, but this time I was able to perceive a distinct agglutination of the typhoid bacilli. Still, no evidence of plasmodia. On the next day I found decided diarrhœa, right iliac gurgling, and tremulous tongue, and the exacerbation of temperature was delayed until later in the day. It was now plain sailing and I proceeded to treat the case as any other one of typhoid—solely on the expectant plan. Daily examination showed diazo reaction and serum test during following two weeks. The pulse remained fast, temperature curve remained capricious and in fact none of the usual symptoms of typhoid were present, until the appearance of rose spots on ninth day. This case was undoubtedly typhoid, but there were these misleading and mystifying conditions: sudden onset,with chill, fever, sweat—repeated for three days; constipation; moist, clean, tongue; no abdominal distension; no delirium; no step-ladder temperature, no demonstrable enlargement of spleen or liver, no early rose spots. To further mystify, there was nausea and the fact that the patient came from a malarial region. The diazo reaction and Widalls test alone were my light. After convincing myself of the accuracy of my observation with these, I felt positive of the diagnosis—a confidence otherwise impossible. Had

I used quinine as a therapeutic test, it would probably have increased the already severe nausea, with possible serious temporary injury to digestive apparatus. Recovery was uneventful, except extreme weakness, and this, notwithstanding the temperature had never remained for six hours so high that I deemed it necessary to order a cold bath.

Case 2nd.—M. W., C. F., age 8, from Jefferson county, entered Alabama Negro Mute School in September. About October 1st she complained of being tired, of headache, backache, loss of appetite, was stupid, sleepy, refused to work or attend classes. First seen about 10 a. m. October 3d; temperature 100 2-5, pulse 84, respiration 18, chest and abdominal examination negative, urine high colored and sp. gr. 1028, otherwise normal. Tongue broad, thick, and covered with heavy dark coat, slight bronchitis, blood analysis normal. (See chart No. 2.) Three days later, at 6 p. m., pulse 98, temperature 103, with morning remission and evening rise. No plasmodia, no Widalls agglutination, but I found general tenderness—especially over hepatic region, gurgling in right iliac fossa, there was *nose bleeding, and diazo reaction* to urine. It certainly looked now like a simple case of typhoid fever, notwithstanding the absence of Widall's test—this not being often present so early in the disease, but with 1-12 in. oil immersion lens I found numerous small ring-like hyaline bodies, and a few a trifle larger, with minute pigmented points near the periphery. These I at once recognized as what Dr. Welch calls the Haematozoon-Falciparum—the parasite of Aestivo-Autumnal fever. The presence of minute pigmented granules and a temperature of 103 suggested an on-coming paroxysm. The white cells showed distinct evidence of Phagacytosis; in fact, I found two lencocytes, contain-

ing each a brassy red corpuscle with its original host. It

I used quinine as a therapeutic test, it would probably

ing each a brassy red corpuscle with its original host. It was now more perplexing than ever and I was strongly tempted to administer quinine, hoping to eliminate malaria and leave an uncomplicated case of mild typhoid fever. After further consideration I decided to postpone this procedure. The following day, the 8th day since the patient first complained of illness, I found her at 11 A. M. with temperature 101, pulse 102, tongue thickly coated white, nausea, yellow sclera, abdominal tenderness and distension, iliac gurgling, enlarged spleen and diarrhœa, diazo reaction present, Widall's test negative. Upon examining the blood I found the small hyaline ring-like bodies—some in motion, others distinctly larger, more refractive and pigmented; in addition, I found several ovals and three crescents. I gave 12 grains Sulph. Quinine in capsules at once and repeated every six hours. One day later I found patient in much same condition, except nausea increased, headache more severe, abdominal distension marked, diazo reaction still present, Widall's negative. I ordered turpentine stupes to bowels, small purge of calomel, and gave ten grains quinine in solution, repeated in six hours, then gave four grains every four hours.

In 24 hours time, the tenth day since first illness, I found fever a little lower, mind clearer, skin relaxed, mouth moist, distension relieved, and tenderness improving. Ehrlich's reaction still present, but no Widalls reaction. This time there were no hyaline bodies, but many ovals and crescents; quinine solution continued, and patient made an uneventful recovery, being free from fever on fifteenth day. Diazo reaction continued, Widall never appeared. This is one of four cases of æstivo-autumnal malarial fever I have met where the Ehrlich test was present throughout the disease. This case is fairly representative of many we meet along the

water courses during the autumn when typhoid is also apt to be prevalent. Here, the nose bleeding, abdominal distension and tenderness, diazo reaction, and gradual onset, closely simulated the regular typhoid fever. Only by careful observation of all the symptoms and signs, together with a close and repeated urinalysis and blood examination can we differentiate. Moreover, the profession must realize and must teach the laity that even the best skill cannot always make a positive distinction during the first few days. Indeed, it is not generally appreciated that our treatment is not so much for the disease as for the patient.

In nearly, or quite all, extreme conditions, where quinine is essential—the first microscopic examination will give clear, unmistakable, evidence of its necessity.

The third case I cannot repeat in detail. The records are scant, but I regard it as one of the most unique and instructive cases I have ever met, and deeply regret that I was not so situated as to give it daily diligent study and to prepare permanent slides. Patient was a daughter of a fellow Counsellor in this Association. I only saw her three times, consulting with her father and Dr. George Hill. First called August 20th and found the following: Age 24, single, good family and personal history, residing in a locality generally free from malarial fever. The following is a brief epitome of her history relating to present attack. Some weeks ago returned from a visit in lower part of the State, where malaria was then rife. She came home to nurse a younger brother who is now convalescent from a very severe attack of typhoid fever. Three weeks or more ago patient complained of a general lassitude, nervous headache, loss of appetite and energy. On August 4th she went to bed with an aggravation of the above mentioned symptoms, temperature rising and falling irregu-

larly. It is an unfortunate idiosyncrasy of the family that they bear quinine badly. By the use of cold sponging and various antipyretics in small doses, a futile effort had been made to control temperature. She had a daily exacerbation of fever each afternoon about 1:30 P. M., reaching sometimes as high as 105 3-5, followed by collapse, cold extremities, and extreme exhaustion. The temperature would sometimes fall to 97 and pulse reach 130. This exacerbation was repeated about midnight and followed toward 4 A. M. by the usual exhaustion. I might mention just here that during first ten days of illness patient had great tenderness over hepatic area, gradually becoming more or less confined to one point about the junction of auxiliary line and eighth rib, but there had been no apparent swelling.

Despite her urticaria, headache, general nervousness, and persistent objections, she had been given quinine in capsules two days—using about 4 doses of 3 grs each, daily. Extreme nervousness and delirium had made it necessary to give sedatives and for this purpose bromides and gelsemium had been freely used. Bowels had been thoroughly purged by calomel, and then full doses of salol administered. At 3:30 P. M., Aug. 20th, I found patient with pulse 136, temperature 103 3-5, respiration 26, mouth dry, tongue thickly coated, but broad and flat, neither red nor pointed, complexion sallow and waxy, face swollen, sclera white and glistening. First heart sound extremely weak, pulse dicrotic, decided bronchitis, great abdominal distension and extreme iliac tenderness, skin moist, flabby, relaxed, spleen much enlarged and sensitive, liver slightly enlarged and extremely tender, especially at point mentioned above. Low delirium, patient aroused with difficulty and soon relapses into semi-comatose condition. I had neither microscope nor facilities for chemical urinalysis and it was thirty miles

to my office. It was well nigh impossible to reach a satisfactory conclusion as to diagnosis. Was it Atypical Malaria or Atypical Typhoid, associated with acute Nephritis; or was it a deep-seated liver abscess and septicæmia, complicated by nephritis; or was it an original typhoid infection followed by liver abscess? The situation was most perplexing. The liver tenderness, the irritable bowel, and the delirium might all be the result of what Dr. Thayer calls "Concentrated Localization of Malarial Parasites" in the respective organs. The treatment had accomplished but little and any diagnosis seemed well nigh impossible. Without further light hope was waning. For over two weeks she had received most vigilant nursing and careful expectant treatment. It was necessary to do something quickly or despair. I returned same hour next day and found pretty much same condition. A careful urinalysis revealed the following: Amount voided past 24 hours, 28 ozs. sp. gr. 1018, color dark brown, reaction acid—decided albumen—a few hyaline, granular, and epithelial casts, distinct diazo reaction. The blood examination revealed a perplexing condition, in fact, here lies the real pith of all I have said. The blood was drawn from finger tip at 4:30, with temperature 104, and I found large pigmented intra-corpuscular bodies, having but little activity, pigment congregated near center. I also noted many actively motile organisms of irregular shapes, with minute pigment points which were very restless—rapidly dancing. In these two organisms I recognized two distinct groups of the Tertian Parasites, one about to begin sporulation, the other probably to reach maturity the next day. I also noticed a great number of small ring-like hyaline refractive intra-corpuscular bodies, some slightly larger and containing minute points of pigment at periphery. Through the field were

seen a few crescents and one or two ovals—these demonstrating two stages of the Aestivo-Autumnal Parasite. So, here was a case of double tertian infection, complicated with an infection of Aestivo-Autumnal Parasites. The majority of the red cells seemed to contain some form of malarial organism. It was the most intense infection ever noted. The patient had previously endeavored to take some small three-grain doses of quinine sulph., in capsules, but it produced such extreme urticaria, coryza, and nervousness it was omitted. I gave her at once 30 grains of cinchonidia sulph. Realizing it might prove disastrous to the kidneys, I nevertheless repeated it in six hours and then gave 15 grains every six hours for three days. The parasites rapidly disappeared except the ovals and crescents. The erratic temperature came to a sudden standstill at about 101° for two or three days, and then assumed a regular step-ladder curve. Further examination of the blood gave distinct Widall reaction on every occasion it was examined. The case was resolved into a simple typhoid and continued a mild course for two weeks, finally making complete recovery without any remaining kidney lesion. The hepatic tendesness disappeared at once—clearly evincing its cause to have been localization of malarial parasites. Such, gentlemen, is a hurried, but long and tedius review of the work attempted, and you will pardon while I mention certain conclusions that I feel justified in drawing from these studies.

First—Typho-Malarial Fever is either Atypical Malaria, Atypical Typhoid, or a combination, depending greatly on locality and general surroundings. The majority of the cases I investigated were typhoid. In other places and during other seasons malaria will cause most of them.

Second—Malaria exists in many cases without its usual classical symptoms, chill, fever, sweat,—indeed, we cannot rely upon abdominal distension, iliac tenderness, gurgling, nose bleeding, nor even diazo reaction—in the absence of other indications. Repeated urinalyses and microscopical blood analysis are great aids to diagnosis and indirectly to treatment.

Third—There is no clinical symptom of Malarial Fever that may not exist in Atypical Typhoid.

Fourth—There is no clinical symptom of Typhoid fever that may not exist in Atypical Malaria.

Fifth—Both diseases may exist simultaneously in the same patient and both may be in a very grave form.

Sixth—Quinine is never certain except in solution.

Seventh—The expectant plan alone is wisest in Typhoid fever, cold water, intestinal antisepsis, proper stimulation, absolute quiet, regular feeding, etc., are but a few of the measures that will afford comfort and avert danger.

DISCUSSION.

Dr. W. W. Harper expressed high appreciation of the paper just read, and endorsed the conclusions which the author reached.

He then referred to a case of laparotomy, in which a high temperature was developed within the first two or three days after the operation. A microscopical examination of the blood was made and malarial organisms were discovered. Quinine was given with prompt control of symptoms, showing that fever was due to malarial poisoning and not to the operation. The patient made a prompt recovery.

Dr. Harper expressed the opinion that two infections, as claimed by the author of the paper, could co-exist in same patient, and emphasized the importance of making bacteriological investigations in order to reach a definite and scientific diagnosis.

He returned thanks to Dr. Harrison for the accurate and valuable studies he had made upon a subject of such vital and every-day importance.

PREVENTION OF TUBERCULOSIS.

By William C. Maples, M. D., Scottsboro,
Member of the Medical Association of the State of Alabama.

The greatest achievements of the medical profession have been in preventing diseases. I am satisfied that the world has never properly appreciated the good that has been accomplished by the medical profession in making possible the control of such devastating diseases as smallpox, scarlet fever, typhoid fever, yellow fever, cholera, etc. If such diseases could be controlled, the highly differentiated state of society that now exists would be impossible. This is obvious from the great disturbance of business that a few cases only of yellow fever in any of our Southern States produces. The world owes the medical profession a huge debt of gratitude for robbing so many pestilential diseases of their terrors.

By examining the Transactions of this Association, I find that the profession of this State have fully appreciated the importance of preventive medicine and that a great deal of valuable work has been done in this field, but an examination of the Transactions shows that the profession of this State have given scant consideration to that veritable scourge, tuberculosis. Where smallpox and yellow fever kill hundreds, tuberculosis kills thousands; yet, the prevention of smallpox and yellow fever is discussed at nearly every meeting of the Association, but if there has been any discussion of the prevention

of tuberculosis, it has escaped my notice. Smallpox and yellow fever have not received too much attention, but tuberculosis has received too little. Constant familiarity with tuberculosis has made the world tolerant of it, while the lack of familiarity with smallpox and yellow fever makes the world intolerant of them. The people up in the mountains of Jackson County begin to feel uneasy when a case of yellow fever is reported in New Orleans; but they will constantly eat and sleep with a consumptive without feeling any uneasiness whatever.

The indifference manifested by the medical profession to the prevention of tuberculosis is my apology for presenting a paper on this important subject. I have nothing new to present to you, but shall simply call your attention to some of the well-established facts about tuberculosis, with the hope of arousing more interest in regard to this subject.

The importance of the subject is manifest when it is remembered that it is now generally conceded that 14 per cent. of all deaths are due to pulmonary tuberculosis; and though it is true that tuberculosis affects the lungs far more frequently than it does any of the rest of the organs of the body, there are many deaths due to other forms of tuberculosis. It is estimated that at least one-sixth of the human race is tuberculous. Tuberculosis is undoubtedly the greatest plague of our civilization, always present, and world-wide in distribution. That tuberculosis can be prevented I firmly believe, for I think it has been abundantly proven that the primary and essential cause of tuberculosis is the tubercle bacillus. I shall not enter into any discussion of the proof of this proposition; for, I think the great majority of physicians believe it to be true, and those who have not

been convinced of the truth of this proposition by the evidence presented by so many able bacteriologists who have thoroughly investigated this subject, would not be convinced by anything I might say. The bacteriologists tell us that the tubercle bacilli are uniformly found in tissues that are tubercular and not in other diseased tissues; that inoculation with pure cultures of these germs produces the disease, and that these germs are uniformly found in the tissues of animals thus made sick. If these are facts, the conclusion is irresistable that the presence of these germs is essential to the development of tuberculosis. Now, this germ belongs to the class known as obligatory parasites, which do not germinate outside of a living, warm-blooded animal, except when grown artificially in the laboratory. The kind of nutriment and degree of temperature necessary for their growth are not found elsewhere. This bacillus, however, especially in the dried state, and when protected from the direct rays of the sun, retains its vitality for a considerable length of time. As the tubercle bacillus does not grow outside of a living body, "in every case of tuberculosis the infecting germs have been derived from a previous case;" so, to the extent that it is possible to destroy all tubercular discharges and avoid tubercular food products, to that extent is tuberculosis preventable. Then, too, we can "ward off the malady by preventing the formation of an acquired predisposition, and by strengthening those weak organs whose inheritance gives to individuals an inherited predisposition. It seems to me, therefore, that there can be no "reasonable doubt" that tuberculosis can be prevented; but at the same time I recognize that it is a difficult thing to accomplish, as there are many and formidable obstacles to remove, ignorance of the true nature of the disease be-

ing one of the greatest. It is difficult to make the uneducated believe that plants so small that they cannot be seen except by the aid of a powerful microscope will grow in living tissues and produce the symptoms of consumption. Pasteur thought that "it is in the power of man to cause all parasitic diseases to disappear from the world; but it is probable that this will never be accomplished. It would certainly be too sanguine to expect to cause consumption to rapidly disappear from the world; yet I am sanguine that the amount of it can be greatly diminished. Consumption has diminished in some countries, notably in England and Germany, and this diminution has resulted, it is believed by those who have thoroughly studied the subject, from the preventive measures that have been instituted in those countries.

For the successful prevention of tuberculosis it is necessary to thoroughly understand the ways in which infection takes place and the sources of the infection, how a predisposition to infection is acquired, and how to overcome such predisposition when it exists.

Infection may take place in three ways; by inhalation, by ingestion, and by inoculation. When the sputa of consumptives are expectorated on the floor or on the ground they usually dry rapidly and, becoming pulverized, float about in the air as sputum dust; and any one breathing air in which is floating this sputum dust is in danger of becoming infected. Until quite recently it was believed that infection nearly always took place by inhalation; and infection must frequently take place in this way; for consumptives expectorate enormous numbers of bacilli, as many as seven billions in twenty-four hours, it is estimated. Such numbers of bacilli scattered broadcast by ignorant consumptives must be a fruitful source of infection. Consumptives, therefore,

should never deposit their sputa on the floor or on the ground, but always into some vessel containing an antiseptic solution, a five per cent. solution of carbolic acid probably being the best. Consumptives that are able to go about should use pocket sputum flasks, of which there are now several convenient forms. If the sputa are deposited on cloths, as is sometimes necessary during the last stages of consumption, the cloths should be destroyed by burning, and before the sputa have time to become dried. Handkerchiefs that are used by consumptives should be placed in boiling water before they have time to become dried. Rooms in which consupmtives stay should be disinfected occasionally, formalin gas being the agent recommended for this purpose. I recently called to see a case of acute pulmonary tuberculosis which I think illustrates the importance of thoroughly disinfecting rooms in which people have died of consumption. The family history of this patient, a married woman, aged 24 years, mother of two children, is excellent. Both her parents are living and healthy. There has never been any consumption, scrofula, or syphilis in her family. Her brothers and sisters are all in perfect health. Till about two months ago (this is April 12, 1900) she was a strong, healthy woman—had been remarkably healthy all her life. She had never waited on a consumptive. She has been living where she now lives about eight months. In this house three persons have died of consumption within the last five years, the last one less than two years ago. None of those persons were related to this patient. No preventive measures were instituted in any of the cases, and the rooms have never been disinfected. I have no doubt that those infected rooms were the source of this woman's infection.

Consumptives will generally heed our advice in regard to the disposition of their sputa, if it is explained to them that it is important to themselves; that they are in danger of becoming re-infected, which would greatly lessen their chances of recovery.

The discharges from tubercular lesions of bones, joints, skin, etc., contain virulent bacilli; so, such discharges should always be thoroughly disinfected or destroyed. Such discharges becoming dried and pulverized will mix with the atmospheric dust, and are liable to be inhaled by persons susceptible of infection. The number of bacilli from these sources is small, however, in comparison with the number expectorated by persons suffering from pulmonary tuberculosis.

It has been demonstrated that the minute fluid particles which are projected from the mouths of persons suffering from pulmonary tuberculosis during the act of speaking, and more especially the act of coughing, contain tubercle bacilli. Some recent observers consider this an important source of infection. To guard against this source of infection, it has been recommended that consumptives wear a mouth mask. In my judgment, it will be difficult to have this done in private practice; but it could be done in hospitals and sanatoria. Patients could readily be induced to hold a handkerchief over the mouth during acts of coughing. Those waiting on a consumptive should avoid, as much as possible, close proximity to the patient's face.

Until quite recently it was believed that infection by ingestion seldom occurred, it being believed that the acid of the gastric juice would destroy the bacilli. Investigation has shown, however, that we can no longer console ourselves with this theory; for, it has been shown that the small per cent. of acid in the gastric juice will

not destroy the bacilli. "Tubercle bacilli can be grown upon media almost as acid as the gastric juice." Some recent authorities claim that infection takes place by ingestion more frequently than by inhalation.

The greatest danger from infection by ingestion is from drinking milk from tuberculous cows, especially when the udder is involved. The large number of cattle affected with tuberculosis—the application of the tuberculin test in a large number of localities indicating that from 10 to 20 per cent. of all cattle are tuberculous—and the extensive use of milk as food, show the danger of infection in this way. Numerous instances in which infection occurred in this way have been recorded. It is claimed that in those countries in which there are but few cattle, consumption is much less frequent, "While those regions where cattle are housed and the people live in close proximity to them are considered particularly dangerous.

There is also danger of infection from eating the flesh of tuberculous cattle. Fortunately, the glandular organs are far more frequently affected than the muscles; and the glandular organs that are used for food, livers, for instance, are usually well cooked before they are eaten. Thorough cooking destroys the tubercle bacillus.

This whole question of bovine tuberculosis is an important one, and is receiving considerable attention at this time. I believe that about twenty states have more or less stringent laws in regard to bovine tuberculosis. I do not know to what extent the cattle of this State are affected with this disease, but it is, it seems to me, an important question for investigation, and I think it is a work that should be done by the State.

Some think that bovine tuberculosis cannot be effectually controlled, except by the general government, and

I incline to this opinion; for, no matter how strong an effort a state might make to suppress bovine tuberculosis within its borders, its effort could be thwarted by infected cattle being sent into it from adjoining states. It is not probable that the states would act in concert in regard to this matter.

Much information in regard to bovine tuberculosis can be obtained from the reports of the Bureau of Animal Industry at Washington.

There should be a rigid supervision of all slaughter houses, dairy farms, and butcher shops.

The saliva of consumptives often contains bacilli; so, knives, forks, spoons, napkins, etc., used by consumptives, should be sterilized after each using. Because the saliva of consumptives sometimes contains tubercle bacilli, there is danger in kissing a consumptive on the mouth. The habit of kissing is unsanitary and should be condemned, especially the foolish habit of kissing domestic pet animals, as dogs, cats, etc. The custom, still somewhat prevalent, of having witnesses and jurors kiss the Bible when being sworn before court, should also be condemned as unsanitary.

Persons suffering from pulmonary tuberculosis may re-infect themselves by swallowing their sputa. I have seen it stated that in the consumptive insane, who frequently swallow their sputa, secondary intestinal tuberculosis is quite common. Consumptive patients should, therefore, be instructed to never swallow their sputa.

There is danger of infection by ingestion from eating any kind of food that has been handled by any one whose hands have been soiled with tubercular matter. Bread, which is sometimes handled by many different persons, is quite liable to become contaminated with tubercular matter. In some of the large bakeries of Germany the

following precautionary measures are instituted: "The moment the bread comes out of the oven it is placed, by the aid of a shovel, upon a piece of wrapping paper large enough to envelope the whole loaf, and by twisting the paper, the loaf is completely inclosed." (Knopf.) It is probable that infection rarely occurs from eating food which has been contaminated in this way, but the possibility of such infection should be kept in mind.

An infant may be infected by the milk of its mother, if its mother has any form of tuberculosis. Therefore, a tuberculous mother should not nurse her child.

Infection by inoculation is believed to be much less frequent than infection by either of the other methods, yet, it is believed that a considerable number of cases of tuberculosis originate in this way. A surgeon, for instance, may inoculate himself while operating upon tubercular tissues. Surgeons, however, fully appreciate the danger of infection with any kind of pathogenic germs, and use every precaution to prevent infection. Laundresses may become infected by inoculation from washing the clothing of consumptives.

Infection may take place from wet nurse to child, and *vice versa.* There is not much danger of any one selecting a consumptive as a wet nurse, but it must frequently occur that healthy wet nurses nurse consumptive children. There are well authenticated cases reported in which tuberculosis was communicated to healthy wet nurses in this way. No wet nurse should be exposed to such danger.

Infection by inoculation may take place from the ritual act of circumcision, practiced according to Jewish rights. Many reported cases show that tuberculosis is not infrequently communicated to healthy children in this way. As this is a religious rite, I suppose it

can not be interferred with, but those who perform this rite should be made acquainted with the dangers incident thereto.

The instances referred to are sufficient to show the importance of inoculation-tuberculosis.

In view of the fact that there are so many sources of infection, and so many ways by which infection takes place, it is no wonder that tuberculosis is so common. Indeed, it is obvious that the great majority of healthy people have but little susceptibility to infection with tubercle bacilli, or tuberculosis would be vastly more common than it is. It is evident that some persons are more susceptible to infection than others. There is quite a difference in the susceptibility to infection among the lower animals. Guinea pigs and rabbits are quite susceptible; dogs and cats, much less so. This increased susceptibility to infection is generally called a predisposition. Just what causes the predisposition is unknown. Lowered cell vitality is probably the chief cause. The predisposition is frequently inherited, consumptives almost invariably transmitting it to their offspring; the predisposition can also be acquired.

The most important factors in the production of an acquired predisposition are bad ventillation, insufficient or unwholesome food, and lack of proper muscular exercise, but, doubtless, any influence that injuriously affects the health increases the susceptibility to infection. Alcoholism and syphilis are strong predisposing factors in the production of pulmonary tuberculosis. Bad ventillation and other unsanitary conditions are believed to be the causes of the frequency of pulmonary tuberculosis among the inmates of jails and prisons, and the employés of some factories. There should, therefore, be a rigid legal examination into the sanitary condition of

school buildings, factories, prisons, and work-houses.

I think there has been an effort in this State to have established a separate camp for tuberculous convicts. This should certainly be done.

It is plain that an acquired predisposition to tuberculosis can be prevented. Even an inherited predisposition can, to a great extent at least, be overcome by proper sanitary regulations and physical training. The results obtained at Cornell University show that weak organs can be greatly strengthened by proper physical training. By practicing breathing exercises, the capacity of the lungs can be greatly increased, the nutrition of these organs can be improved, and, consequently, increased resistance to invasion by pathogenic germs can be developed. I think there should be a medical examination of all school children, and those children whose physical development is found to be defective should receive proper physical training. The greater part of this work must necessarily be done during the period of school life. Few teachers, especially in the common schools, properly appreciate the importance of physical training, and parents are generally altogether ignorant of the importance of this matter.

Many sanitarians now believe that to successfully solve the problem of the prevention of tuberculosis it is necessary to have special institutions, hospitals, sanatoria, etc., for the exclusive treatment of the consumptive poor. Among the consumptive poor the sanitary conditions are often so bad that it is difficult to properly treat them at their homes, even if an intelligent effort is made, which is not often the case, as few physicians are willing to give such patients the necessary attention; and the majority of this class of patients are too ignorant to appreciate the importance of preventive measures, and consequently no preventive measures are

instituted. In the homes of this class of patients I have frequently seen the sputa scattered promiscuously over the floors and walls. The placing of this class of patients in sanatoria would be an important preventive measure, as an important source of infection would be removed every time one of these consumptives was sent to such institutions. Then, too, the rigid prophylatic measures enforced in such institutions and the favorable results obtained do much to educate the public in regard to the nature and prevention of this disease. To the establishment of such institutions in England and Germany is largely due, it is believed, the diminution in the number of consumptives in those countries. Here is a splendid field for philanthropy. By building and maintaining such institutions for the treatment of the consumptive poor the philanthropists would benefit mankind in two important ways; many valuable lives would thereby be saved, and knowledge would be diffused in regard to a most important subject. If some of the large amounts of money that are given to institutions of learning were used for the purpose of building sanatoria for the treatment of the tuberculous, I believe that a great deal more good would be accomplished. I think there is almost as much need for special institutions for the treatment of the consumptive poor as there is for special hospitals for the insane. The consumptive poor are almost as helpless as the insane, and, in my opinion, almost as dangerous to the community.

As a means of educating the public in regard to the nature of tuberculosis and thereby causing the adoption of preventive measures, I think the State should furnish physicians with circulars setting forth the danger of infection, and how to prevent it; which circulars

the physicians should place in the hands of their consumptive patients, and those of their families and friends. These circulars should be prepared by the State Board of Health, and the language should be clear, concise, and untechnical, so that persons of even ordinary intelligence could fully understand them. Instructions coming from the State Board of Health would command much more attention than instructions given by the attending physician; for a physician, like the ancient prophets, is not without honor save in his own country. The placing of these circulars in the hands of the people would cause physicians to take greater interest in this subject. I am satisfied that a great many physicians do not give their consumptive patients proper instructions as to preventive measures, and some wholly ignore this important matter. The old saying that "an ounce of prevention is worth a pound of cure" applies well to tuberculosis, though I believe that even pulmonary tuberculosis is a curable disease.

It seems to me that there should be legal enactments requiring better sanitary conditions in sleeping cars. It is notorious that the sanitary conditions in sleeping cars are generally bad, and it must frequently happen that consumptives, even those in the last stages of the disease, ride in these cars; so, these cars are quite liable to become infected with tubercle bacilli. All kinds of cars should be thoroughly disinfected at stated intervals. It has also been recommended that theaters, and all other places in which large gatherings take place, should be regularly disinfected.

Before a great deal can be accomplished in the prevention of tuberculosis a great work of education must be wrought, for, without the intelligent co-operation, not only of the whole medical profession, but of the gen-

eral public, as well, but little can be done.

In conclusion I appeal to the members of this Association to give more attention to this great question, for, it seems to me that it is almost criminal to treat this question with indifference.

DISCUSSION.

Dr. B. L. Wyman said that he had listened to the paper just read with much interest, and seeing Dr. Cunningham present, and knowing that he had given a great deal of attention to the subject of which the paper treated, he would like to hear from him, and to inquire whether in the prisons of which he has charge tuberculous convicts are separated from non-tuberculous ones?

Dr. Cunningham, in responding, unqualifiedly endorsed the paper of Dr. Maples, and pronounced it a valuable and vigorous presentation of the subject,—a subject of the utmost importance and entitled to the best study, both theoretical and practical, that physicians can devote to it.

No disease exists that should be more clearly understood than tuberculosis, for, in its various forms, it causes the death of about one-seventh of the human race. As widespread and destructive as it is, he expressed the belief that, in the course of time and by the rigid enforcement of proper measures, the disease could be absolutely eradicated. The causation, predisposing and exciting, of no disease is more clearly understood by the profession. Being a specific, infectious, disease, it is just as impossible to produce tuberculosis without tubercle bacilli for germs as it is to produce wheat without wheat, or peas without peas.

The predisposing causes are inherited or acquired; the exciting one is the reception into the system of tubercle bacilli, and their multiplication and colonization.

By the strict regulation of marriage, the inherited predisposing cause could be destroyed. By the proper observance of personal and home hygiene, many of the acquired predisposing causes could be avoided. As the production of tuberculosis requires the contact of a specific germ with a susceptible soil, it is clear that if the latter condition does not exist the germ cannot take root or grow. It is doubtful whether the most virulent tubercle bacillus can produce the disease in an insusceptible subject. If, therefore, we could control the predisposing causes the germ of tuberculosis would be harmless.

Many of these causes can be controlled, therefore no higher duty devolves upon the medical profession than to teach the people and the law-makers of the country how this may be done.

As for the germ itself we know that its vitality can be destroyed; it becomes, therefore, only a question of adopting and enforcing proper regulations for doing this.

The germ is strictly a parasite and requires a living host for its procreation and growth.

Except in proper media, furnished in laboratories for experimentation, it does not multiply or grow outside of the living host, but when reproduced in such host, as it is in large numbers, it escapes through discharges from the body. He took issue with the author of the paper as to tubercle bacilli living or reproducing themselves in cold-blooded animals, except when such animals are kept in confinement.

Inasmuch as tubercle bacilli escape from the living host in which they reproduce themselves through the discharges from such host, it is clear that if the bacilli in these discharges are destroyed, the disease would ultimately become extinct for the want of seed. Tuberculosis can not be inherited any more than gonorrhoea can.

The predisposition to it on the part of individuals consists in the lack of vigor or activity of the phagocytes of their bodies. People must be educated to realize the importance of destroying the seed of the disease. Much might be accomplished in this direction by intelligent and voluntary action on the part of the people, but the power of the law would require to be invoked in order to accomplish all that might be done. Public sentiment and adequate statutory provision must co-operate to achieve the great object of exterminating tuberculosis from the earth.

As the greatest number of cases of tuberculosis are pulmonory, it is obvious that the most prolific source for the spread of the disease is through the sputa of such persons. Discharges from tubercular abscesses and from any mucous tract that is tubercular may also help to spread the disease.

As already said, all such sputa and discharges should be promptly disinfected, so as to deprive them of the power of propagating the disease.

All cases of tuberculosis arise from hetero-infection. The disease is local in the beginning, and through auto-infection it continues to spread in the individual until death closes the scene. If, therefore, we can prevent the introduction of the germs into the body of a susceptible individual, we have prevented that individual from contracting the disease.

This is unquestionably the most important field in which the profession can work for the prevention of disease. While the acute infectious diseases may kill their thousands in occasional epidemics, tuberculosis kills, without interruption, its tens of thousands in all countries and in all seasons.

The methods of infection, very many of which the Doctor clearly and forcibly pointed out in his paper,

should be studied, for, upon our knowledge of these methods must depend our success in abating or avoiding them.

In the vast majority of cases, tubercular infection is by way of the lungs through the respired air. The germ itself, clinging to dust or to foreign particles--most probably minute portions of dried sputa-floating in the air, is inhaled, and takes up its abode in the lungs, where it goes on multiplying until it does fatal mischief.

Infection by inoculation is a very rare method. Surgical wounds may become infected by tubercle bacilli, therefore, the sterilization of instruments, dressings, *et cet.*, should be scrupulously observed. The destruction of tubercle bacilli should be kept in view the same as the destruction of pyogenic or pathogenic organisms.

Open wounds, by accident or otherwise, may become infected by tubercle bacilli. Such cases have fallen under my observation.

A far more important source of infection, because more frequent, is through food. The germs of tuberculosis may fall upon food that is eaten raw, for example, fruit, such vegetables as are eaten without being cooked *et cet.*, and in this way communicate the disease.

The most frequent source of infection through food is by eating tubercular meat or drinking milk swarming with the bacilli, especially, the former.

The zoological distribution of tuberculosis is almost universal, very few animals being exempt. The cow is especially predisposed to the disease, and may become a fruitful source of infection.

All of these sources of infection can be absolutely rendered harmless by proper disinfection or by thorough cooking.

Is is only by agitating this question in the profession and by educating the people that any progress can be

made in the war we should ceaselessly wage for the extermination of tuberculosis, the great destroyer of the human race.

The paper the Doctor read is a step in the right direction, and presented the subject very justly and fully.

In reply to a question, submitted by Dr. Wyman, as to whether or not tuberculous convicts are separated from non-tuberculous ones in the prisons of which I have medical charge, I regret to say that such is not the case. It is greatly to be desired that this humane and sanitary measure will soon be enforced in all prisons.

Dr. E. H. Sholl said:

I endorse the paper of Dr. Maples as well conceived and timely.

I must confess that I do not share the enthusaism of the last speaker (Dr. Cunningham) as to the prospects for the early extermination of tuberculosis, having heard the Doctor on other occasions express the opinion that by the enforcement of proper measures the disease could be exterminated in fifty years. I believe that so long as our negro population remains with us all efforts at extermination will prove futile. The negroes now furnish a fertile field for the propagation and perpetuation of the disease, the habits of life of many of them contributing to such a result. This is in sharp contrast with the condition that existed prior to the war between the states. When the negro was a slave he was rarely the subject of tuberculosis, as I can testify by an abundant opportunity for observing. At that time I practiced in a section of the country in which there were large plantations, cultivated exclusively by negroes. Now, since the negro has become a free man he seems to fall an easy victim to consumption. Why this difference in the susceptiblity of the negro to the infection of tuberculosis

has come about, I shall not undertake to discuss at this time.

The law of heredity—powerful but obscure—plays no small part, I believe, in the perpetuation of this disease. This law may pass over several generations of a given family and then re-assert itself with fatal force.

Within my own observation I have seen instances of this kind, that is, the disease seemed to have been hereditary and after disappearing for one or more generations it re-appeared.

Dr. Cunningham asked what Dr. Sholl meant by disappearance of heredity? Does he mean that the heredity disappears or does the opportunity for contracting the disease disappear?

Dr. Sholl said in reply that the question cannot, or may not, be absolutely answered, and asked how the disease, after having disappeared from a family for so long a time, could re-appear in some of the descendants?

Dr. Cunningham replied that the explanation was easy, the later generation simply contracted the disease anew.

Dr. P. G. Trent said:

I agree with the position taken by Dr. Cunningham and have acted upon it, so far as possible, during my professional career. Tuberculosis has existed in my family; I lost a brother and two double cousins from the disease, and, therefore, have deemed it wise to avoid, as far as possible, exposing myself, fearing that a susceptibility exists which might, under great exposure, render me liable to the disease.

I believe I am immune, but do not propose to expose myself more than I can avoid.

Dr. Maples, in closing the discussion, expressed satisfaction at the way in which his paper had been received. He detailed instances that had occurred under his own observation in which the disease had been propagated from one person to another, and also through an infected house.

FRACTURES OF THE VAULT OF THE SKULL, AND SUGGESTIONS AS TO TREATMENT.

By T. Joseph Dean, M D., Union Springs, Ala.

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Injuries of the skull were known and active measures taken to repair them, even in the days of pre-historic medicine. Sufficient evidence of this is found in old skulls, showing unmistakable signs of having undergone trephine operations. In the last decade, or I might say, in the two last decades, most valuable work has been accomplished in cerebral topography, by which the surgeon is enabled with almost mathematical accuracy to excise irritable cortical centers, to aspirate dropsical ventricles, remove cerebral neoplasms, etc.

Tri-facial neuralgias are now successfully relieved by neurectomy and craniotomy,—modern surgical procedures. The success achieved by these operations heralds a new era in cerebral surgery.

But, instead of inviting your attention to these fascinating subjects, I shall try to briefly discuss a class of head injuries which, by reason of their frequency and consequences, are of the utmost importance, namely:

"Fractures of the Vault of the Skull, and Suggestions as to Treatment."

At graduation, I was so familiar with the differential diagnosis of compression and concussion of the brain, as given in the text-books, that my confidence in authorities and teachers would have been

rudely shaken had it been intimated that I would encounter any difficulty, relying wholly upon rational symptoms, in making a proper diagnosis of fractures of the skull, with depression. But, after some experience in cases of this kind, I am prepared to join one of the recent authors in saying that "fractures of the calvarium, whether of the vault or base, show no rational symptoms that may not arise from contusion, laceration, or hemorrhage, without fracture.

Were each depressed fracture of the skull accompanied by symptoms of compression, such as, stertorous breathing, paralysis of special and sensory nerves, the diagnosis would be on the surface and the treatment clear.

But, every surgeon of a reasonable amount of experience fully realizes that the classical rational symptoms of a depressed fracture of the skull are often absent for an interval of days, and even years, after the injury has been received. I regret to say that there is a strong disposition on the part of many physicians to withhold any surgical interferance in cases of fracture of the skull when typical rational symptoms are absent. This practice is, I believe, dangerous and false conservatism, and acountable for many cases of epilepsy and insanity.

A very general belief prevails, even among physicians, that the cranial cavity is sacred to the encephalon, and will allow no encroachment on its contents, without an immediate manifestation of symptoms of compression.

Although the cranial cavity contains a very delicate and sensitive organ, yet, by reason of the ventricles and sub-dural spaces with which nature has provided it, a considerable amount of pressure may be borne for variable lengths of time.

In dealing with fractures in the adult and child, we must bear in mind the marked anatomical differences

in the skulls of the two. The skull of the child is thin and not susceptible of division into tables, while that of the adult is thick, strong, and composed of two tables and a vascular zone. The external table is much thicker than the internal and gives strength to the skull, while the internal is thin and very easily broken.

Fractures in the adult may involve the entire thickness, or be limited to either table. With a correct knowledge of the external table, we can easily understand the great improbability of its being fractured alone.

Fractures of the internal table alone are possible and I am inclined to believe that they occur much oftener than is generally thought. In such cases the fracturing force is not sufficient to entirely overcome the elasticity of the external table, which, after being forced in, rebounds to its normal position, leaving the internal table fractured, and frequently depressed. This explains why when both tables are involved, we find the extent of fracture for greater in the internal than in the external. The character and extent of fracture as observed in the external table is no strict criterion by which to judge the extent and general character of the fracture of the internal, nor can the absence of fracture in the external table justify us in excluding fracture af the internal table. So, in dealing with fractures of the skull, we may lay it down as a rule, to which there are few exceptions, that when a fracture of the external table of the skull exists, it matters not how insignificant it may be, there is also one of the internal table.

For convenience, we may divide fractures here, as elsewhere, into simple, compound, and complicated. It is well to keep in view the fact that extensive fractures of the skull may exist without scalp wounds. In such cases, (and they are by no means uncommon,) it is difficult, and at times quite impossible, owing to the forma-

tion of hæmatoma, to make a diagnosis without incising the scalp.

Symptoms of fracture of the skull without concomitant injury to cerebral tissue are clearly defined by disturbances of the functions of the nervous system, and for that reason both simple and compound fractures are overlooked, until meningitis and epilepsy develop. The point, then, which I desire to emphasize, is, that the symptoms of the non-complicated depressed fractures, found at the time of accident, are not those of compression.

In fact, the only symptom to which any importance can be attached, save shock, is the existence of depressed bone, detected either by the finger, or probe, or the line of fracture may be exposed, so as to be seen. As a rule, these patients are rendered unconscious for only a short time, then, reaction occurs and they get up and walk, or even resume their work. If they should find a scalp wound, they call to see a physician to have some "sticking plaster" applied, or, if there is a simple swelling, they apply a liniment, little suspecting the seriousness of the trouble. It is not an uncommon thing for physicians to close a scalp wound over an extensive fracture of the skull and give a favorable prognosis. They should not be surprised if called back soon to treat the patient for meningitis, or later, for epilepsy.

In fractures of the skull, with laceration and contusion of cerebral tissue, the symptoms of compression are pronounced from the beginning, the essential lesion being the damage sustained by the brain. Symptoms of compression coming on sometime after the injury are caused by the depressed bone exciting certain vascular changes in the contents of the cranium.

So thoroughly am I convinced of this, that when I see a patient presenting symptoms of compression soon

after injury of the head, I give a doubtful prognosis, and, further, do not expect the symptoms to be entirely relieved by elevating the depressed bone, if such should exist. Fractures of the skull itself are usually not serious.

The dangers to be apprehended are:

First, the damage sustained by the brain and its membrames.

Second, the delay of surgical interference.

My experience with the fractures of the vault of the skull has been such as to justify me in the following conclusions:

First, the rational symptoms of compression coming on immediately after the receipt of an injury are due to injury of the cerebral tissue.

Second, those coming on later—hours or days—are due to congestion or inflammation of the cranial contents, excited by irritation of the depressed bone.

In order to emphasize this point and to further sustain the position I have taken in regard to the symptoms of fracture of the skull, I shall ask the privilege of briefly reporting three or four cases.

First Case: Male, age 22, with history of having been struck on the head with a brick. He walked in, feeling that his condition was not at all serious. When examined, it was found that he had an extensive scalp wound in the center of his forehead; on closer investigation, it was found that he had a depressed fracture. He was anæsthetized, scalp cleansed, wound enlarged, and area of depressed bone, 2 or 3 inches, brought to view, the bone being detached and drawn down on the membranes. The depressed fragment was elevated, and the patient made an uninterrupted recovery.

Second Case: Male, age25, with compound depressed fracture, without symptoms. He gave the history of

having been struck on the head with a hammer; after examination of his head, it was found that he had a depressed fracture; patient was anæsthetized, the wound was enlarged, and a depression, the size of the pole of the hammer, located over the moter area of left side, was exposed. The depressed external table, along with a much larger area of the internal table was removed. Patient made an uneventful recovery.

Third Case: Patient with compound depressed fracture came to have his head dressed. On examination, fracture was diagnosed. Patient refused to submit to operation and has since become an epileptic.

Now, notwithstanding the fact that each of these had extensive depression, not one of them presented any of the rational symptoms of fracture.

At the risk of becoming tedious, I will report a couple of other cases in which the symptoms of compression came on at time of injury and were not relieved by the removal of the depressed bone. They were gun-shot fractures of the skull, presenting all the symptoms of compresion;the fragments of bone and blood-clot were removed, the ball having passed through and out of harms way, but the patient made no improvement. The autopsy showed extensive brain lesions. These patients had all the symptoms of compression and were not relieved in the slightest degree by elevation of the depressed bone, showing that the symptoms were due to brain injury and not to pressure.

TREATMENT.

Contrary to the opinion of some authorities, I am opposed to the so-called expectant treatment, when there is a suspicion of fracture, and I mean by that, suspicion founded upon the circumstances of the injury,

coupled with symptoms that would lead one to suspect fracture. For most part, in fractures of the skull, antiphlogistics and sedatives should be suspended, as they have been in pelvic inflammation, and superseded by definite surgical interference. The practice of waiting for the development of the rational symptoms of compression before instituting measures to relieve depressed bone, is almost as bad surgery as waiting for stercoraceous vomiting and general peritonitis in strangulated hernia before operating.

When we consider that the mortality of operation for the elevation of the depressed bone is but a little above one per cent., if undertaken before vascular changes have been excited, whereas, if the operation be postponed till symptoms of compression develop, the mortality is over thirty-five per cent., it does seem that no stronger argument in favor of earlier and more universal surgical interference could be produced. In elevating depresed bone, it is generally found necessary to fenestrate the skull, which can be done with either trephine or chisel. Instead of asking ourselves the question, what cases should be operated upon, the question is, what cases should not be operated upon? All compound fractures, with or without depression, are, with few exceptions, cases for exploratory operation. The only exception is in children, where neither symptoms nor depression exist. All simple fractures, with symptoms, whether there be depression or not, should have the scalp incised, and if the fracture is of any extent, the skull should be trephined; for, no one is able to predict the condition of the inner table by the character and extent of lesion found in the external table.

I desire to place myself on record as favoring exploratory operation in fractures of the skull in the adult, even in the absence of symptoms of compression.

So thoroughly am I convinced of the wisdom of exploratory craniectomy; of our utter inability to judge of the deeper parts of the fracture by what we see on the surface; of the great danger attending all cases, where the fragments of the internal table are found down on the brain; of the ease and safety with which these operations may be done, that were I the victim of such an injury, I would request, if in possession of my intelligence, that the skull be opened.

The failure to diagnose fractures of the skull is one of the blunders of hurried and incomplete examination. A patient presenting a scalp wound or contusion, with a history of having received a severe blow, kick, or fall, on the head, should be looked upon as in danger, and the most thorough examination for fracture should be instituted. No surgeon should close a scalp wound till he is able to say positively that no fracture exists. If a doubt remains, that doubt should be interpreted to mean that the scalp must be incised and the bone examined. In the doubt lies the danger.

ACUTE TONSILLAR DISEASES AND THEIR SEQUELÆ.

By Joseph H. Abraham, M. D., New York.

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When I was honored by the receipt of an invitation from your president to prepare a paper to be read before you, I very gladly accepted, and it affords me unalloyed pleasure to address so many of my old friends, and to present to them some points which will, I trust, be of interest; therefore, I desire to call your attention to some of the sequelæ and complications of tonsillar diseases.

The tonsils belong to the hæmopoietic system, and are germinating centers for the leucocytes. Their period of greatest activity is in childhood and youth, when all the lymphatic organs are especially active, and when the thymus gland is disappearing. (Pluder 1).

Surrounding the tonsillar follicles are plexuses of lymphatics, and in the tissues of the tonsils there exists an intimate lymphatic network, composed of minute channels, from which the lymph is collected by larger lymphatic vessels. These pass to the superior deep cervical glands, which frequently become enlarged in tonsillar inflammations, and can be easily demonstrated in the upper part of the neck. Gooddale(2) proved that absorption exists normally in the tonsils and takes place through the mucous-membrane of the

crypts. Hodenpyl(3) demonstrated that rarefaction of epithelium is of constant occurrence in the tonsils; as a result of this process, parts of the epithelium are considerably diminished in thickness. Therefore, any irritant to the cells increases desquamation, which may denude the tonsils, in places, of their epithelial covering and favor lymphatic absorption of the toxins, often found in this vicinity, into the general circulation.

For practical purposes, I have divided this paper into a description of acute catarrhal (or superficial) tonsillitis, acute lacunar (or cryptic) tonsillitis, and peritonsillar abscess. Some knowledge of the relative frequency of tonsillar disease may be obtained from Lenox Browne's(4) hospital reports of 12,330 cases of tonsillar disease treated by him in ten years, representing 13% of all the cases of throat, nose, ear, and neck diseases treated; of this number, 3,167 cases were of acute or subacute inflammation, rather more than ¼ of the whole.

Acute catarrhal inflammation of the tonsils occurs primarily as a lesion in acute pharyngitis and is found regularly in measles, scarlet fever, and diphtheria. Secondary extension of an acute catarrhal and lacunar inflammation through the tonsils may produce phlegmonous tonsillitis, and in some cases the infection is primary.

Frequent bacteriological examinations have demonstrated the presence of numerous micro-organisms within the lacunæ, amongst which, streptococci, staphylococci aureus et albus, Frankel's pneumococcus, and Friedlander's pneumo-bacillus have been found.

In Meyer's(5) report of 53 cases, he found staphylococci in 14 cases, streptococci in 15 cases, and in the remaining 24 cases a mixture of the two. In 152 cases classified by Reid(4) at the Central London N. T. & E. Hospital:

Streptococci were found in 58 cases;
Staphylococci (aureus, 31; albus, 23; and others, 8) were found in 62 cases.
Diplococci were found in 32 cases.

Amongst the other forms, Klebs-Loffler bacilli were found in 7 cases.

Nicolle(5), Herbert(6), and Pakes(7), inoculated serum tubes from the throats of patients and found Friedlander's pneumo-bacillus present 8 and 5 times, while Griffon(8) and Besoucon(8) examined the tonsillar secretions of forty persons, of all ages and conditions, and found the pneumococcus constantly present.

Sendziok(9) examined 133 cases of lacunar tonsillitis and found staphylococci and streptococci were constantly present. He also found that hypertrophic tonsillitis predisposed to an attack and that the disease was equally divided between the two sexes, but a majority occurred between the ages of 20 and 30.

Out of 1,000 cases reported by McKenzie(10), 323 cases occurred between the ages of 20 and 25, and 184 cases between 15 and 20. Persons once affected are very liable to subsequent attacks.

Patients suffering from congenital or acquired hypertrophy of the tonsils are very prone to an attack. Retained masses within the lacunae may produce an irritation favoring inflammation .

Lymphatic hypertrophies in the vault of the pharynx, causing mouth breathing, thereby lowering the normal physiological function of the gland, predispose to an attack. In four cases of recurring lacunar tonsillitis in children, I have obtained a complete cure by removing the adenoids.

Edwards(11) and Severn(11) reported six cases of milk infection, causing acute lacunar tonsillitis, and traced the infection to one particular cow in the dairy.

In the milk were found the same micro-organisms as were found in the exudates from the tonsils.

Chapin(12) considers disordered stomach, due to overfeeding, producing an acid fermentation, as a frequent cause of tonsillitis in children. A rheumatic, gouty, and strumous diathesis, and other conditions, as overwork, mental depression, and menstrual (Gautier 13 and Raymond 14) disorders are predisposing causes; in some, by the action of the toxic substance in the blood upon the lymphatic tissues of the glands; in others, by reducing the normal physiological resistance of the mucous membrane of the tonsils, allowing previous non-virulent bacteria to assume a virulent type and favoring absorption into the system of their toxins.

The exciting causes are exposures to cold or sudden thermo-climatic changes, and they vary considerably in different localities.

In comparing Delavan's(15) and MacKenzie's(15) tables, Delavan finds that in New York tonsilitis is most frequent in March, least frequent in September; Mackenzie finds nearly the opposite conditions existing in London.

Inflammatory changes, due to mechanical irritation and inhalation of irritating gases, may be a direct cause. Frankel(16 and Lenox Browne(16) consider intra-nasal operations a frequent cause, and especially after the use of the galvano-cautery. Lastly, bad hygienic surroundings favor an atack, as the following will prove:

In December, 1898, I was called to see a girl, aged 7, suffering from an attack of acute lacunar tonsillitis. At the end of 24 hours, the entire household, composed of two girls, three adults, and a servant, were affected. The drain-pipe of the refrigerator was connected with the house drain, and for several days the family had no-

ticed a peculiar taste and odor in the milk, butter, etc. The drainage was corrected, the refrigerator cleansed, and no subsequent attacks occurred.

The various forms of acute inflammation of the tonsils vary mainly in degree. The œdema of the tonsils is due to the engorged vessels which cause obstruction of the muciparous glands, and it is followed by infiltration of the parenchymatous tissues, with an exudate of serum and leucocytes. In lacunar tonsillitis, the epithelium is thus deprived of its nutrition, the cells become swollen and cloudy, followed by rapid multiplication and death, producing the yellowish masses we see upon the surface of the tonsils and so pathognomonic of the disease. Leucocytes, numerous micro-organisms, (see Etiology), and at times fibrin are found in the exudate. Sometimes these coalesce and cover the tonsils with a serofibrinous exudate, resembling a membrane. Transudation of the leucocytes occurs to such an extent in the parenchymatous tissues that it is impossible to differentiate the lymph-nodules from the surrounding lymphatic tissues. This, in conjunction with the engorged vascular supply, increases the size of the tonsils. As a result of the infiltration, the cells die, pus is produced in the substance of the tonsils, or as occurs most frequently, the inflammation may extend externally and involve the intercellular spaces, followed by coagulation-necrosis, with the formation of a peri-tonsillar abscess.

In the majority of cases we find great prostration and severe constitutional symptoms, which are entirely out of proportion to the local manifestations. Usually the person complains of chilly sensations, which, at times, may be a distinct rigor, these, with headaches, aching pains in the back and extremities, followed by a feeling of dryness in the throat and of stiffness in the muscles of the neck, are usually the premonitory symptoms.

Following the onset, pain in the throat is the most frequent symptom; it is lancinating in character, and located more at the angle of the inferior maxilla. The pain is often reflected to the ear, and follows an extension of the inflammation to the mucous-membrane lining the eustachian tube, producing a catarrhal otitis media, with tinnitus and a temporary impairment of hearing. When the inflammation attacks the laryngeal structures the voice will be altered; this is especially true when the swelling of the pharyngeal structures interferes with the nasal resonance. The temperature rises rapidly, and in children may reach as high as 105° F.; in adults the temperature varies from 101° to 103° F. The tongue is furred, the breath foul, and there is often vomiting and diarrhoea in infants, while older persons complain of nausea and obstinate constipation. The pulse is full and regular, and averages 100 to 120. The amount of urine is decreased; it is highly colored, loaded with urates, and contains an excess of urea. A great amount of indican may be found, but there is a deficiency of chlorides. Albumin is occasionally found in small amounts. On examination the tonsils are found to be swollen and the mucous membrane deeply reddened. Scattered over the surface are seen the characteristic yellowish masses, marking the orifices of the lacunae; sometimes they coalesce, forming a creamy exudate, resembling a membrane. A slight swelling and tenderness of the cervical glands may be found. Osler (17) considers the development of general or local paralytic symptoms in lacunar tonsillitis as proof of an error in diagnosis. The general symptoms continue for from one to three days, when the inflammation subsides, the fever departs, and the local conditions improve.

In peri-tonsillar abscess the symptoms vary greatly in severity from those of an acute catarrhal and lacunar

tonsillitis. Frequently the symptoms of the latter precede those of the former from one to three days or more. The pain in the throat is deep-seated and throbbing, or boring in character. Dysphagia is intense, the patient can hardly swallow his own saliva and refuses food on account of the swelling and severe pain on opening his mouth. The breath is very foul, the tongue covered with a thick, furry, yellowish-gray, or brownish material, the teeth are covered with sordes, and the patient's general expression is one of great anxiety and suffering.

Locally, the tonsils and surrounding structures, the uvula and velum palati, and frequently the laryngeal structures, are reddened and œdematous. As suppuration increases, the swelling of the cervical glands and surrounding tissues also increases, and spontaneous rupture may occur at the most dependent portion.

The differential diagnosis between lacunar tonsillitis and diphtheria is at times extremely difficult. Upon clinical and bacteriological examinations rests our diagnosis; therefore, in all doubtful cases cultures should be made, that the presence or absence of Klebs-Loffler bacillus may be determined. In some cases of diphtheria, the bacilli may not be found at the first examination, but subsequent examinations will reveal them; again, the presence of the pseudo-diphtheria bacillus makes a positive diagnosis somewhat doubtful. The majority of physicians must rely upon a clinical diagnosis, and in order to do so an enumeration of the following local and constitutional symptoms will aid. A history of repeated attacks is common in tonsillitis, seldom so in diphtheria; as a rule, the onset of diphtheria is gradual, with a low temperature, rarely over 103° F., which continues for some time; the pulse is rapid, depressed, and at times irregular. In lacunar tonsillitis the onset is usually abrupt, with a high temperature,

which may reach 106° F. early in the disease. The pulse is rapid, full, and regular. With the low temperature of diphtheria, albumen appears early and persists for a considerable length of time, while with the high temperature of tonsillitis it is rarely found; if so, usually about the second day, and only lasts from twenty-four to forty-eight hours. The membrane of diphtheria begins as a small patch, usually of a pearly gray or of a dense white color. It soon spreads to the faucial pillars and uvula and on removing the membrane the surface bleeds and is eroded.

In lacunar tonsillitis the exudate is of a yellowish color and marks the orifices of the lacunæ. It can be easily removed, leaving no bleeding or eroded surface. In diphtheria, frequent paralysis of the throat and other muscles, with marked asthenia and severe toxæmia, are found. In tonsillitis, they rarely, if ever, occur.

At the onset tonsillitis may be confounded with scarlet fever, but the characteristic exanthema and tongue symptoms of the latter will clear the diagnosis.

Recent clinical and bacteriological evidence proves that the tonsils are, without a doubt, portals through which pathogenic micro-organisms enter the system, and that infectious diseases and serious sequelæ may result therefrom. Du Mesnil de Rochmont(18) reviews the recent literature on the bacteriological investigations, as well as the complications following acute tonsillar affections. Amongst the latter, he mentions the following: Pleuro-pneumonia, osteomyelitis, albuminuria, paraplegia, erysipelas, orchitis, etc. The same author reports an epidemic of acute tonsillitis in the Altonia Hospital, following the admission of a patient suffering with acute tonsillitis and acute articular rheumatism. A few days later 17 patients and a nurse in five wards in the same corridor developed acute tonsillitis. No case of tonsillitis existed prior to the above,

therefore, the infection seemed clear. Cultures from the tonsillar exudates demonstrated the presence of staphylococci, streptococci, and a few small non-pathogenic strepto-bacilli. Following the tonsillitis, three cases developed acute rheumatism, four others, nephritis, pericarditis, endocarditis and myocarditis, respectively. In concluding his article, he advocates isolation in all cases of acute lacunar tonsillitis.

In 1866 Trousseau called the attention of the profession to the fact that acute tonsillitis frequently precedes an attack of rheumatic fever; since then, numerous investigations have verified his deductions, therefore, if we accept the theory that rheumatic fever is an infectious disease, then, the following evidence will prove that rheumatism is frequently a sequel of acute tonsillitis.

Sir Willoughby Wade(19) claims that rheumatic fever is a secondary disease arising from the absorption of microbes, or their toxines, into the system, and frequently follows a primary infection of the tonsils. In support of his views, he reports a number of cases of rheumatism following the first attack of tonsillitis, while other cases followed after repeated attacks, in which no previous history of rheumatism existed. Wagner(20) reports two interesting cases of tonsillitis, without previous histories of rheumatism, in which, after a bacteriological examination, the same micro-organisms were found in the knee-joint and urine as in the diseased tonsils. Sterling(21) mentions five cases and Ross(22) four cases of rheumatism following acute lacunar tonsillitis.

Between the years of 1890 and 1898 Lachmanski(23) studied 73 cases of acute rheumatism in children at the Emperor and Empress Frederick Hospital in Berlin and found 26 cases were due to exposure to cold and

other causes. In eleven cases, pharyngitis was the cause, in two, lacunar tonsillitis. In three cases, tonsillitis occurred between attacks of articular rheumatism.

To the above I can add another:

Miss ——, age 24, professional nurse, complained of a sore throat. On examination, her pharynx and tonsils were found reddened and swollen. Protruding on the surface of the glands, the characteristic yellowish exudates were seen. Temperature 102.8° F. With a decline of the faucial symptoms, there appeared on the third day pain and swelling in her right shoulder, which appeared subsequently in the left shoulder, knee and ankle joints. The patient gave a good family history, but had suffered previously from two attacks of tonsillitis, never from rheumatism.

M'Donnell(24) reports a case of acute tonsillitis followed by pericarditis without arthritis, and Jessen (25) mentions a case of pericarditis with a double pneumonia, which proved fatal, following a staphylococcus tonsillitis. Packard(26) reports 7 cases of tonsillitis followed by endocarditis. In five of the cases he was positive that there existed no abnormal heart lesions previous to the attacks of tonsillitis. Mayer(27) reports a case of lacunar tonsillitis followed by endocarditis. Holt(28) reports a case of cardiac murmer, following an attack of tonsillitis. In both cases the heart was previously normal, and no articular symptoms existed. Out of 120 cases of tonsillitis reported by Roeger (29), twenty-four developed a cardiac murmur, fourteen commenced and terminated with the tonsillitis, ten persisted later.

The following cases occurred in my own practice:

A girl, aged 8, complained of a headache, with severe chill and sore throat. On examination the tonsils presented the yellowish plugs and were quite œdematous

and reddened. Temperature 105.2 F., pulse 120. Under treatment the temperature fell to 101° F. in twenty-four hours. On the third day all local symptoms had seemingly disappeared, but on examining the heart a loud systolic murmur was heard distinctly at the apex and transmitted to the left. On the fourth day, articular symptoms appeared in the left knee and ankle-joints, and on the tenth day a marked case of chorea had developed. On the mother's side, a family history of rheumatism existed, although the child had never suffered from articular pains, or any heart murmurs, previous to this attack.

B. Abrahams(30) reports 248 cases of chorea, of which 53.4% had a family or personal history of sore throat.

Heddæus(31) reports a case of metastatic pleurisy following an attack of acute tonsillitis, due to the staphylococcus pyogenes aureus, and Jessen(25) mentions a case of wandering pneumonia, pleurisy, and nephritis following a streptococcus tonsillitis.

Baduel(32) reports four cases of tonsillitis due to the diplococcus of Frankel, which was found in the blood, nephritis following later.

Hollick(33) reports a fatal case of tuberculous meningitis following tonsillo-glossitis, and Fagge(34) mentions a case somewhat similar.

Zilgien(35) reports four cases of tonsillitis, followed by angina pectoris.

Troquart(36) mentions two cases of suppurative adenitis, and Vergely(36) one case after an attack of acute tonsillitis.

Delaven(15) reports a case of œdema of the glottis, following peri-tonsillar abscess, which proved fatal.

Hamilton(37) reports a case of convulsions in a 7 year old girl following a case of acute suppurative tonsillitis.

Sendziok (38) reports a number of cases of laryngitis and bronchitis complicating acute lacunar tonsillitis.

Buchke (39) and Jessen (25) mention cases of osteomyelitis following streptococcus and staphylococcus tonsillitis.

Ward (40) reports a fatal case of septic thrombophlebitis following a peri-tonsillar abscess. Bosworth (41) reviews the literature of the complications following peri-tonsillar abscess and mentions a number of investigators whose cases are somewhat similar to those reported under lacunar tonsillitis.

The proofs presented in this brief paper establish the etiologic factors of some of the infectious diseases, as well as, other sequelæ and complications, arising from acute attacks of tonsillitis.

Our duty is to prevent such infections, to investigate carefully each case of tonsillar disease, to reconsider and classify them as more than innocent affections, and, in future, to treat the attack energetically, and assiduously apply the local, general, and operative treatment in the interim.

At the onset of acute catarrhal tonsillitis, administer a saline purgative, spray or brush the tonsils (and pharynx) every hour with a solution of:

Formalin ..... m xv-xx
Potass chlor ..... ʒi
Liq. ferri chlor ..... f ʒi
Aqua menthae pip. q. s. ad ..... f ℥iv

M. Sig.

Early in the disease cold applied internally, in the form of gargles or cracked ice in the mouth, and, externally, in the form of cold compress or ice-bag is of invaluable aid. The patient should drink frequently of

equal portions of cold milk and vichy. For the febrile condition, administer Antipyrin, and, in conjunction, give a capsule containing:

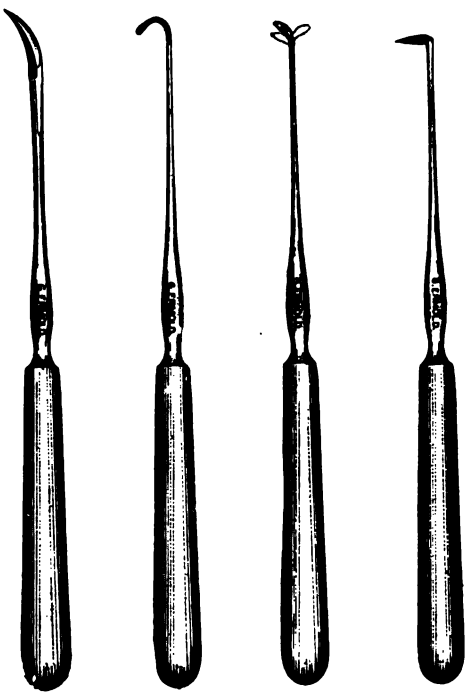
Quinine hydrobromat.....gr. i
Sodii benzoatis.....gr. ii
Salol.....gr. v
M. et. ft. cap. No. i. Sig. one q. 8 hrs.

If the inflammation extends to the deeper tissues, the tonsils and surrounding structures become œdematous and interfere with deglutition. Multiple punctures and scarifications are then indicated in order to produce free bleeding, and at this stage heat, applied internally, in the form of gargles and hot drinks, and externally, in the form of poultices and fomentations, is indicated.

In the remaining forms of tonsillitis, much depends upon the stage of the disease. If we begin treatment within twenty-four hours of the onset, we can frequently abort the attack by administering at once a tablet containing calomel, grain ¼, and sodium bi-carbonate, grain 1, every thirty minutes for eight doses, followed later by a seidlitz powder. Remove with a curette the yellowish exudates from the crypts, and apply on a cotton-tipped probe to the surface and into the crypts of the tonsils every two hours the following:

Menthol.....ʒss
Guaiacol.....ʒiss
Glycerine.....ʒii
Alcohol Absol. q. s. ad.....℥i
M. Sig.

Cold should be applied immediately (see directions given under acute catarrhal tonsillitis). Administer every half hour half a drop of tr. aconite and watch



carefully for the physiological effects of the drug, stopping immediately upon its appearance. Give internally every two hours, in a little milk or water:

Guaiacol carb.....gr. i
Sodii benzoas.....gr. ii
Sodii salicylas.....gr. v
M. ft. Pulv. no. i. Sig.

Pus should be evacuated as early as we can diagnose its presence; tonsillar abscesses should be incised with a sharp, pointed, knife, and sprayed with the compound Formalin solution. A peri-tonsillar abscess should be opened with a sharp-pointed curved bistoury, protected with a piece of cotton or adhesive plaster, so as to expose only the cutting surface, the incision being made where the abscess points, or at the most dependent portion. The direction of the incision should be from above downward and slightly outward, parallel with the anterior pillar. (See cut opposite.)

The isolation of all cases of acute lacunar tonsillitis is advisable. In adults and children, recurring tonsillitis and inflamed hypertrophied tonsils are positive indications for a radical procedure. When all acute symptoms have subsided, subsequent attacks should be prevented by a partial or complete removal of all tonsillar tissue. Hypertrophied tonsils with numerous crypts, and spongy surface, that we so often see in children or young adults, should be amputated, either with the tonsillotome, or with the galvano-cautery wire or knife. If the former instruments are employed, I invariably cauterize the cut surface in from ten to twenty days with a galvano-cautery knife, so as to form a dense cicatrix and to eliminate the remaining crypts. Hypertrophied tonsils in adults, with ragged surface, enlarged crypts, and broad base, should be removed entirely. The adhesive

fold of mucous membrane, which is frequently attached to the anterior faucial pillar and inner surface of the tonsil, should be incised with the right-angled knife, and the tonsil removed with a gouge. The after-treatment consists in keeping the parts thoroughly cleansed with the comp. formalin solution.

The conclusions to be derived from a study of these affections are: 1. All cases of acute tonsillar disease should be considered more than trivial affections. 2. Acute lacunar tonsillitis is an infectious disease. 3. Isolation should be practiced in all cases of acute lacunar tonsillitis. 4. Recurring attacks of acute tonsillitis is an indication for the partial or complete removal of the tonsils. 5. A careful systemic examination and treatment should be applied during and after an attack of acute tonsillitis.

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DISCUSSION.

Dr. D. L. Wilkinson said: I fully agree with Dr. Abraham in the majority of his views on tonsilitis. I have treated more than 300 cases of tonsillar troubles during the past three years. The tonsils are indeed portals to the circulatory system. Various forms of staphylococci and streptococci find lodgment there. Lacunar tonsillitis is peculiar in affecting the debilitated only—men usually escaping. Children and young women suffer most. This

is especially true when young women suffer from menstrual troubles, or where children have a rheumatic or scrofulous tendency. This disease is rare in the negro race, though I have seen some cases. I have met comparatively few cases in married women, or in those over 25 years of age. The infectiousness of this disease is fully proven by several epidemics through which I have passed. The trouble in the treatment of tonsilitis by the general practitioner, and I speak from that standpoint, is in the differentiation of the several diseases which may affect the tonsils. I rely a great deal on nitrate of silver, in from 40 to 120 grains to the ounce, applying it with a mop once or twice daily. When used sufficiently early in these troubles, three or four moppings are all that is necessary. I do give a laxative, and a gargle, using preferably:

℞ Acidi carbolici ..... gtt xxx
Potass chlorat..... ʒ i
Listerine
Pyrozone.....āā.....℥ i
Aquae q. s. ad..... ....℥iv
M. S. Use as a gargle every third or fourth hour.

I am sorry that time does not permit a full discussion of the various troubles of the tonsils and their treatment, from the standpoint of a general practitioner.

Dr. G. S. Brown said: I rise principally to thank Dr. Abraham for the pleasure and instruction his paper has given me, and to say that I feel a personal pride in the mere fact of such a splendid paper being presented for the consideration of the Alabama State Medical Association. It is a paper that must necessarily be of the utmost importance to the general practitioner. The classification and regular order in which the doctor shows these throat affections lie in the minds of the specialist

must come to many of us as a ray of light in a very dark place. One would think from the clearness with which it is all stated that the doctor had it in mind to write a paper entirely for the general practitioner, but when he comes to the treatment we see that he is rigidly true to his scientific training and here it seems to me that he might unbend a little in a compromise that would meet the requirements of the general practitioner who could not in every case carry out the strictly surgical methods of the specialist. Of course, most of us understand that the milder catarrhal affections of the kind get well in a few days without treatment, and the most that is needed is a mild astringent wash to relieve the pain. In the lacunar variety we have a true surgical infection and, of course, the best treatment must be to clean out these lacunæ and promote their drainage and thereby stop the septic absorption, but with small, fractious children, or where the light is not good, or where one cannot get intelligent co-operation nor assistance from the family, it is in many instances simply impossible to carry this out. On the other hand it is very easy to apply a solution of silver nitrate in varying strength, and it rarely fails to cure. Perhaps this solution is used more often for this affection than all other remedies combined, and to my mind it is almost as scientific and quite as effective as mechanically cleaning out and disinfecting the lacunæ could possibly be. The doctor says the lacunæ are infected to the depth of one-eighth of an inch. The day after a 40 gr. solution of silver nitrate has been applied (strictly to the tonsil), these lacunæ will usually be found broken down, gaping open and often merging into one opening; in other words draining freely. The symptoms are an index to this establishment of surgical drainage; the fever falls, the pain in the throat, as well as the muscular pains due to septic fever disappear promptly.

I believe the stronger the solution used the more prompt will be the response. In fact, I believe the careful insertion of a point of the solid stick into each lacuna would be equally as scientific and curative and more quickly done, perhaps, than the surgical treatment practiced by the specialists. This disease must be, for a long time at least, one belonging more of necessity in the practice of the general practitioner than in that of the specialist, and until the general practitioners have become merely distributing agents and a specialist can be had in every town and community, he must be able to treat and does actually treat many more cases than the specialists.

PNEUMONIA.

By Richard Matthew Fletcher, M. D., Huntsville,

Grand Senior Counsellor of the Medical Association of the State of Alabama.

The subject of pneumonia will be presented for your consideration, a subject of vital importance, particularly, to the general practitioner. The present and past pathology and treatment of this grave malady will be reviewed. In pneumonia the lung tissue is involved. As a rule one of three varieties will be found, (1st) lobar, (2) lobular, (3) inter-lobular or interstitial. I will confine my remarks mostly to the discussion of the lobar form of the disease and will use the terms lobar, croupous, or fibrinous interchangeably. This form of pneumonia, by many recent authorities, is regarded as an infectious disease and a specific fever, with lung inflammation as a local manifestation. Others claim that it is a pneumonitis, with resultant symptomatic or secondary fever. In acute lobar pneumonia the inflammation, usually, is confined to the lining membrane of the air cells of the lobe involved. However, in some cases the inflammation may extend into the bronchi. In lobular pneumonia the process is reversed; instead of going up, the inflammation travels down into the smaller tubes. Usually lobar pneumonia is an acute disease, though sometimes it is found in the sub-acute or chronic form. The exutdea of lobar pneumonia is peculiar, and consequently gives occasion for difference in terminology.

Rokitansky denominated it croupous. Virchow and others contend that the term croupous should be applied only to those forms resulting from, or associated with, laryngeal croup; and in the ordinary form it should be called fibrinous, as the exudation is fibrinous, rather than croupous.

Hoffman, Flint, and some French authors say these terms are all incorrect, and suggest pneumonic fever as the true definition. In the New England States and other parts of this country the disease is called lung fever. At a meeting of the New York Academy of Medicine, November, 1899, Dr. Andrew Smith read a paper on the pathology of lobar pneumonia as a basis for treatment, in which he gave some novel views and ideas in regard to the pathology.

Dr. Smith said in using the term pneumonia he desired to restrict it to the form variously designated as lobar, fibrinous, or croupous. He says pneumonia is not an inflammation of the lung. He further claims that pneumonitis can be produced in a great many ways, and go on to suppuration and even gangrene without being pneumonia. He said there was one thing which, if introduced into the parenchyma of the lung, would always cause pneumonia; and that thing was the pneumococus. This fact, he said, would enable the doctor to sharply differentiate between pulmonary inflammation and pneumonia.

He says it is not enough to admit the infectious nature of the disease, and define pneumonia as an inflammation excited by the presence of a specific parasite. He asserts that the parasite is always present in the lung, but that it does not always excite an inflammation. Time will not permit further citations from the doctor's paper, though unique and interesting.

At the present time it seems that the consensus of opinion is with those who contend for the infectious na-

ture of pneumonia. When I was a student at the University of Pennsylvania, Professor Wood taught that pneumonia was an inflammation of the parenchyma of the lungs. However, the unprecedented activity of the medical mind during the last quarter of the Nineteenth Century has largely revolutionized medical thought; both theory and practice have undergone wonderful changes. Virtually traditional medicine has been thrown to the dogs.

I will now refer to some interesting points in the study and investigation of pneumonia. One fact is that the lower lobe of the right lung is most frequently attacked. Why this is so, is yet a subject for disputation. Those who advocate the infectious nature of the disease explain it in this way: They say the right primary bronchus being longer than the left, pneumococi are drawn into the right lung in greater abundance than into the left, and naturally they travel downward into the most dependent portion of the lung.

In tuberculosis it is affirmed that bacilli attack the upper part of the lung, rather than the lower lobes.

Another point of observation is the fact that when an upper lobe is primarily attacked with pneumonia, it generally occurs among the aged or intemperate. This disease affects both sexes at all ages; men more frequently than women, chiefly owing to modes of living, habits, and occupations. The lobar form of pneumonia occurs rarely between infancy and twenty years of age; frequently, from twenty to thirty; less so, from forty to sixty, and very frequently after sixty years of life. Loomis makes an astonishing statement when he says nine-tenths of all deaths after the sixty-fifth year are caused by lobar pneumonia. Lowered vitality from whatever cause predisposes to this disease. Improper and insufficient food, exhaustion

from overwork, intemperance, and ill-ventilated apartments are all potent factors in causing pneumonia. Secondary lobar pneumonia occurs mostly as an intercurrent affection during the course of some exhausting disease, such as chronic malaria, measles, scarlet fever, typhoid fever, and many other diseases. This form of pneumonia is also secondary to epidemic influenza. In LaGrippe, however, you will find mostly the lobular or inter-lobular forms. In any variety following "grippe" we have a serious complication; the tendency is to spread and involve new tissue much more rapidly than in the ordinary form. This has been my observation. As stated before, it is an intercurrent trouble, coming on at the time when there is lowered vitality and great systemic depression, caused by the specific poison of the primary disease, LaGrippe. In other words, at the time when the system has in great measure lost its resistive or recuperative power, thereby increasing the tendency to spread and involve new tissue, until a whole lobe, or a whole lung, or even more, becomes involved.

In this form of pneumonia usually there are three well-defined stages, with characteristic pathological changes in each stage. In the first stage, we find congestion of the lining membrane of the air cells, lasting about twenty hours. In the second stage, the affected air cells are obliterated, being filled with a fibrinous inflammatory exudation. At this time, the lung resembles liver, hence this is called the stage of red hepatization, or of consolidation. It is of several days' duration, and in favorable cases terminates by crisis, the temperature falls, and the breaking up of the inflammatory exudation begins.

The third stage of gray hepatization follows the crisis, which marks the end of the second stage. The duration of this stage is several days, and in most cases it goes on

to resolution. This resolution in reality is the fatty degeneration of inflammatory products, and their subsequent liquefaction and absorption.

The symptomatology of pneumonia is generally well marked, usually beginning with a chill, or with languor of short duration. From the start, cough and pain are mostly present. Complicated with pleurisy the pain will be sharp, but it is sometimes purely neuralgic. In either case, the pain often extends back to the lower angle of the scapula. Fever sets in at once, with temperature varying from 100 to 104 or 105° F. The pulse is full and hard, ranging from 100 to 120 per minute; breathing, quick, shallow, and panting; disproportion in respiratory movement and pulse beat. In adults, respirations may be 30 to 40, whilst pulse is not more than 90 or 100 per minute. Children suffering from this disease breathe very quickly. This rapid breathing is accounted for partly from pain and partly by the large amount of lung tissue involved, subtracted from the normal breathing area. The tongue is furred, skin hot and dry, cheeks flushed. If there should be pleuritic involvement, more or less cyanosis will be present. Congestion of liver and kidneys, and hyperæmia of gastro-intestinal tract are not unusual. The sputa are generally of a brick-dust, tobacco-juice, or prune-juice color. The foregoing are some of the most prominent symptoms of acute lobar pneumonia.

I will now give the physical signs of this disease. The crepitant rales are the only characteristic signs of the first stage. They are produced by the affected air cells and are heard at the end of inspiration.

In the second stage, on inspection, the respiratory movement will be found increased in frequency, shallow, and panting. Respiration on the affected side is restrained, but increased on the sound side. Palpa-

tion shows vocal fremitus over the affected lobe markedly increased. This is the stage of consolidation or solidification of lung tissue. Solid lung tissue, being a much better vibratory medium than the air cells, should on palpation show increased vocal fremitus. If the bronchi leading to the part should, from pressure, stricture, or any other cause, become so obstructed that the voice would be excluded, the fremitus might be diminished, or even absent. The same is true, if pleurisy with effusion exist over the solidified lung, so as to intercept the voice sounds.

Percussion, in this stage, shows marked dullness over the consolidated lobe; the line of dullness does not change with position of the body. Auscultation at this time reveals bronchial breathing over the solidified lung. All the air cells are now filled with inflammatory exudation, and the breathing has entirely lost its vesicular quality. At this time the vocal resonance is so concentrated and distinct that it is called broncophony, or bronchial voice. When articulate words can be heard it is termed pectoriloquy, or talking from the breast.

The third stage is one of gray hepatization or resolution. It might with propriety be called the retrograde stage, or the return movement to the normal signs.

Now, by inspection we will find that respiration is becoming natural and vocal fremitus much diminished.

Percussion shows dullness, yielding to normal resonance. By auscultation we find vesiculo-bronchial breathing and increased vocal resonance. Until resolution is complete, crepitant and subcrepitant rales may be found. The diagnosis in pneumonia is not difficult, but the prognosis should always be guarded, as pneumonia is one of the most fatal of all acute diseases.

Having given the symptomatology and pathology of acute lobar pneumonia, I will now discuss the treatment

from a theoretical and practical standpoint. Before 1850 the treatment was heroic; from 1850 to 1865 it was transitory. After that period it was expectant. There was a time in the history of medicine when certain principles and facts were thought to be pretty well established as guides in the treatment of disease. The pendulum then kept pace with the ability of the medical mind to materialize its thoughts. We are now confronted with many remedies and with many plans or modes of treating disease, but no plan yet devised seems to have met with the popular favor once enjoyed by many old-time remedies. At the present time, we are burdened with new theories, new ideas, and new remedies to such an extent that a whole life-time would be too short to test the merits and demerits of the interminable catalogue of remedial agents already presented for medical consideration.

Diseases come and go and change their types from benign to malignant, and from malignant to benign. As observed in diphtheria, scarlet fever, and other affections, the benign require little or no treatment, the malignant are mostly death-dealing from the beginning, change in type requiring change in treatment.

Recent research may have modified our views in the treatment of pneumonia, as well as in the treatment of other diseases. We may admit that lobar pneumonia is an essential fever, with lung complications; that it is infectious and depends for its cause on a micro-organism, or that it is non-infectious. Infectious or non-infectious, microbe or no microbe, the inflammatory changes are the same now that they were fifty or one hundred years ago, and are amenable to the same treatment now, as then. The morbid condition, the essential pathology, we call inflammation, is now, as it ever has been, present somewhere and in some form in disease, constitutionl symp-

toms indicating its type. Let us take pneumonia as a type of inflammation and give the means employed to combat the disease. The remedies chiefly relied upon in years gone by were venesection and arterial sedatives, such as, mercury, antimony, veratrum viride and others. At one time the profession entertained the belief that blood-letting relieved pain, reduced temperature, and lessened the force and slowed the action of the heart; that it removed morbid matter, the product of inflammation, from the blood. In congestion, if early resorted to, it might and often did arrest or abort inflammation, and after inflammation was established it checked its extension, shortened its duration and promoted absorption and resolution. Nevertheless, there are men to-day who not only oppose venesection, but contend that it neither removes morbid matter from the blood nor lessens the blood in the inflamed part, but that it does impoverish the blood and lessen its powers of repair; that it lowers general vitality, increases the hazards, and delays convalescence. In times past, the doctor had a lot of work to do with his lancet, blisters, emetics, and cathartics. These were his reliable forces and he was diligent in their use. In the palmy days of blood-letting the profession held it to be the remedy *par excellence* for inflammation, and claimed that it was potent for good.

In 1862, Professor Gross said general bleeding might justly be regarded as standing at the very head of the list of constitutional remedies for inflammation. He said it was the most sturdy and efficient means of relief. At another time he said, though bleeding is now denounced and no longer fashionable, if we formerly bled too frequently, too copiously, and too indiscriminately, it is equally certain that the operation is not often enough resorted to at the present day. In my early practice, we bled, with proper restrictions, in the more seri-

ous affections of the three great cavities, head, chest, and abdomen, the pulse and general condition of the patient being our guides. In the early stage of acute disease bleeding was the rule, not to bleed, the exception. I venture the assertion that not one-third of the doctors of to-day ever used the lancet, or ever saw it used, notwithstanding the text books up to date both suggest and recommend its employment. The beneficial effects of extracting blood may be tested by applying a few leeches near an inflamed conjunctiva; in a short time the blood vessels contract and the inflammation subsides. Now then, if general bleeding will do for inflammation of internal organs what we see cups and leeches do for an inflamed eye, there is virtue in blood-letting. Conditions seldom occur to justify the use of the lancet in young children, or in the old and feeble. Its employment should be mostly confined to the robust and to the first stage of the disease. I have fewer regrets for the use than for the non-use of the lancet.

In pneumonia a pertinent question is: What does bleeding do? It lessens the volume of blood, allays nervous irritability, slows and calms the excited, irritable, heart, so that it contracts more deliberately and causes the blood to flow placidly and smoothly through the arteries and with less force into the inflamed part.

The most advanced pathological thought is not antagonistic to venesection in pneumonia.

Prof. Walsh says that blood-letting has been found to diminish the mortality and lessen the mean duration of the disease; also, to curtail the duration of the prominent symptoms, both subjective and objective. Delafield, in Pepper's work, recommends the employment of the lancet in exudative inflammation of the lungs.

Bartholow and Hare advocate blood-letting in pneumonia.

Dr. Alfred Mercer reports a very striking case. He says a middle-aged, well-developed, man sustained crushing pressure of the chest by being caught between the door-jams of a round house and an entering engine, fracturing one or more of his ribs on each side of the chest. The shock and depression following were extreme. In a short time after the injury, reaction was fully established; high fever, strong pulse, and labored respiration supervened. He was bled 24 ounces, with prompt relief to respiration. Next day the pulse was not so strong and full, but the respiration was much more labored, he was cyanotic, asphyxiated, and unable to speak. The vein was re-opened and 14 ounces more of blood was taken, after which respiration became full and easy, blueness disappeared, and he began to talk. With the help of a few small doses of antimony for a few hours he went on to recovery. This man was in the presence of impending death and demanded immediate relief. What else but the lancet could have relieved him so promptly. No other means would have been equal to the emergency. The pathological condition was congestion of the capillaries, producing blood stasis, closing the air cells and preventing oxygenation of the blood. The lungs and right heart were blocked with blood, and the nerve centers were being poisoned and paralyzed.

It may be said that this was a case of traumatic congestion, differing somewhat from idiopathic disease, and that similar cases are rarely met with. All cases, however mild or severe, idopathic or traumatic, pass through the same stages of development—fever, congestion, exudation, and solidification—if not arrested in the beginning. Therefore, the indications for treatment

are the same. In the case under discussion, venesection lessened the volume of blood, thereby taking a load off from the lungs and right side of the heart, giving both organs less work to do. Blood was not sent to the lungs any faster than oxygenation could take place, hence the congestion, cyanosis, and dysnœa were relieved, and the man saved.

To confirm the statement above made, I will now discuss the chief points of interest in a case of idiopathic disease. Dr. T. I. Mitchell, of London, and his assistant, were hastily summoned at mid-day to see a man said to be dying; he was a cartman, aged 26 years. Two days before his illness, he was quite well. He was suddenly seized with difficulty of breathing, dreadful cough, and agonizing pain in his side; his face was blue, extremities cold, and he was pulseless at the wrist. His feet and hands were put into hot water, and the doctor proceeded to bleed him. "What!" said the assistant, "bleed a man pulseless and dying?" "Yes," said Dr. Mitchel, "wait and see the effect." The arm was corded, and after two or three minutes a vein was opened. At first, the blood flowed drop by drop, but soon increased to a continuous stream, and was allowed to flow till sixteen ounces were taken, with relief from pain and all prominent symptoms. In the evening there was some return of symptoms, when six ounces more of blood was drawn from the same opening with permanent relief. As they walked from the house, the doctor's young friend declared that he had learned more of practical physiology, pathology, and therapeutics, relating to the functions of the heart and lungs, from this case and its treatment than he had gained in all his previous studies. The plans of treatment now employed and the remedies now in use for the cure of disease are so numerous and so various

that one might question which, if any, have a particular influence in promoting recovery in pneumonia.

The sedative saline treatment, the coal tar derivatives, sedative and stimulating expectorants, salicylates, salts of ammonia, antimony, mercury, ipecac, veratrum, aconite, quinia, iodide of potassium, chloral, chloroform, creosote, oxygen, cold and hot water, alcohol, strychnia, opium, jackets of cotton and silk, serum therapy, and a host of other remedies are now in vogue. In conclusion, after what I have already said, let me suggest, as a starting point in the treatment of pneumonia, that we fall back upon the old remedy that has stood the test of critical observaion for more than a thousand years. I hope, if I have done nothing more, that I have to some extent proven the intrinsic value of venesection in the treatment of this disease. In the preparation of this paper my purpose was to emphasize the importance of blood-letting. If in any way what I have written will be helpful to the earnest workers of this day and time, my object will have been more than accomplished.

DISCUSSION.

Dr. W. C. Maples said:—The treatment of croupous pneumonia is an important subject, considering the frequency of this disease. I believe that there are cases of pneumonia in which blood-letting is indicated, but I do not think we should use blood-letting indescriminately in this disease. My opinion is that most pneumonia patients are treated too much, especially in regard to the use of stimulants, such as alcohol and strychnine. I think the indiscriminate use of stimulants in the treatment of pneumonia is more harmful than indiscriminate blood-letting. Suppose a horse had to draw a load five miles which would require about all the energy the horse

is capable of exerting, would it not be foolish to apply the whip to the horse from the start? Such a course would cause the animal to over-exert itself and probably to become exausted before completing the work. So, in the treatment of pneumonia, if stimulants are given from the beginning they will bring about the exhaustion which we are attempting to prevent. Stimulants should not be given until the heart shows signs of failing. I believe that opium is the most important remedy we have in the treatment of pneumonia. It should be given during the first three days of the disease, and I believe that most pneumonia patients are greatly benefitted by being kept well under its influence during that time. The opium counteracts the nervous shock which attends the onset of pneumonia and puts the patient in the best position to resist the disease. I use the opium in the form of hypodermic injections of morphia.

APPENDICITIS.

By Samuel Lloyd, M. D., New York.

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It was my privilege to be invited to read a paper before the New York Medical Union, at their meeting on December 26th, 1899; and at that time I gave the statistics of twenty-five cases of appendicitis that I had seen during the first attack and followed for years, until the final outcome was known.

These twenty-five cases offer some suggestions in regard to what happens in the so-called conservative treatment of appendicitis. Of the twenty-five cases, six terminated fatally. This is a mortality of twenty-four per cent., and is rather startling when compared with the statistics of experienced operators. Fitz gives the mortality in his statistics, compiled in 1886, as twenty-six per cent.

Eighteen of my cases had recurrent attacks. In other words, only seven escaped without a recurrence. This is contrary to the usually accepted statements of the physicians who have reported that their cases of appendicitis *always* result in recovery under medical treatment. The explanation seems to me to be a comparatively simple one: They do not follow up their cases. Many of these cases I traced from one physician to another before their histories were complete. In this series of cases a gradual tendency to an increase in the

frequency and severity of the attacks was noticed. I do not mean that every attack is worse than the last, but that the general condition gets worse, and the sum-total of the attacks one year is apt to be greater than that of the year before. Nor do I mean to be understood as claiming that the attacks need necessarily follow one another in rapid sequence. On the contrary, several months or even years may elapse between attacks, but in the end the testimony of the patient will be that the colic is more frequent and more severe, constipation less readily combated, and indigestion more constant and more marked. The right spasm is more distinct and more tense; the patient is inclined to protect this side, and keeps it turned away from danger as much as possible; the appendix becomes more readily palpable and more painful to the touch. Flesh is gradually lost, and the general tone is decidedly below the proper and usual standard.

Similar ideas have been advanced by many other authors. Mynter (Appendicitis, p. 31), says that most authors agree that all attacks of appendicitis predispose to new attacks, unless the appendix happens to be totally destroyed by gangrene, complicated by a local circumscribed abscess, or unless obliterated by destruction of its epithelium, and cicatricial retraction of new-formed tissue. His cases showed recurrences in thirty-five out of a total of seventy-five (47%).

German statistics on this point are interesting. Rotter [3] at the St. Hedwig Krankenhaus in Berlin, gives the statistics of all the cases treated in both the medical and surgical wards of that hospital. He claimed that 48% of all cases which were brought to the hospital in the first six days of the disease recovered spontaneously, and the whole number of spontaneous recoveries, that is, of cases admitted at any stage of the

disease, was 74%. If the cases of circumscribed abscesses alone are considered, the percentage of recovery without operation rises to 90%. In the Moabit Hospital, in Berlin, in three years and a half there were one hundred and forty-nine cases, with a mortality of 14%. In these cases in the Moabit Hospital, Sonnenburg operated ninetey-four times, or in 63% of all the cases, while Rotter only operated in 25.3% of all the cases.

Ewald[4], in considering these reports, draws two conclusions: (1) "That it is unnecessary always to operate at the earliest possible moment, and (2) that in cases of peri-appendicular abscess, spontaneous resolution occurs in an appreciable number of cases." He adds that, "It cannot be doubted that a resorption of the pus * * * took place. In what manner this is accomplished, whether by auto-drainage into the cœcum through the perforated vermiform process, by direct perforation into the gut, or by resorption on the part of the peritoneum must remain problematical."

Rotter also gives some data in regard to recurrences. In the histories of his cases, only twenty-one or twenty-four were recorded as having had previous attacks. They rarely had more than two attacks and the second usually occurred within a year after the first. Attacks occurring later than that were rare.

These statistics are so absolutely at variance with those of other observers, and with my own, that they are given only to show how a medical man can be led astray. These cases were mostly observed in large hospitals and in Germany. In that country, they do not generally class appendicitis as a surgical disease, but treat it medicinally until an abscess is formed, when they open and drain, and it of course is a fact that the statistics of cases seen in hospital practice are essentially different from those seen in private practice, when the future condition of the patient is to be considered.

Every one admits that the majority of cases will recover from the first attack, and even from several attacks; every operator has seen large abscesses disappear, but the difficulty is that when these patients are observed by the physician he records them as triumphs for his skill in therapeutic application and forgets to observe them for the next five or ten years.

That is the difficulty with Rotter's cases. They were not watched long enough. This, I think, I was able to show in my recent article on this subject. I have no doubt that if every one would follow up his cases, no matter how much it might hurt his pride to ask information from his successor in the patient's confidence, we would have statistics so abundant that this question would be incontestibly settled.

We concede the fact "that it is unnecessary always to operate at the earliest possible moment," but that is not the point. The question is how are we going to tell whether the patient will recover from the present attack or whether operation must be done to save his life? Another question also enters into this discussion at this point: Which method of treatment, in the end, is most economical for the patient, considered from the standpoint of both physical and financial well-being? In other words, which will cause the least loss of time, the least risk, and the least pain and discomfort?

If it could be proved that these statistics from St. Hedwig's Krankenhaus and from the Moabit Hospital, in Berlin, as interpreted by Ewald, were correct, there would be no question about it. Toft[5] found the appendix diseased one hundred and ten times in three hundred autopsies, and in a state of active ulceration in 5% of the examinations. Hawkins[6] in one hundred bodies of patients, dead from other than appendicular disease, which he examined at St. Thomas' Hospital,

London, found sixteen in which there was past or present disease of the appendix. Fitz(7), in 1886, placed the recurrences at 11%, but, later, he raised the percentage to 44%(8) Krafft's statistics(9). also disprove these statements of Rotter's, for, he found that twenty-four of his 106 cases had had previous attacks, generally one to three years before, but in one case twenty years had elapsed. Treves has mentioned a case that had had fourteen attacks and McBurney one with twelve. My cases showed, as already said, recurrence in eighteen out of twenty-five cases, 72%. This is so much greater than the results already mentioned that it cannot but cause comment. It is explainable, however, when one considers that my cases were watched for years and careful records kept of their condition. Hawkins, out of 250 cases, found a history of previous attacks in 23.6%. Wood(10) studied the question especially and reports as follows: Irish, 50%; Price, 50%; Richardson, 49.8%; Ranzohoff, 13%; Knaussold, 23%; Porter, 9.5%; Bryant, 11 to 17%; Sahli, 20%; Gage, 33.5%; Wyeth puts it at 80%, and Willy Meyers (11) at 90%. Finally, Lennander(12) says that all the cases he has observed long enough have had relapses.

Could we throw out of consideration the question of relapses, we could then adopt Ewald's views, but, unfortunately, all surgeons have been obliged within the past few years to recognize the fact that recurrence is the rule and not the exception, and it is this that has led to the axiom *that operation should be performed in every case of relapsing appendicitis.*

A question raised by this statement is: how many times should the patient have an attack before we operate? McBurney has said, twice, and to my mind this is the limit, although, I am free to confess that I feel safer for my patients, after they have had one well-

marked attack, when I know that the appendix is removed.

Large masses in the right iliac fossa during an attack of appendicitis have disappeared; how or when, we do not know. Is it always safe to wait for this disappearance? Are we not quite as likely to have a rupture of a tense abscess into the general peritoneal cavity, or have it burrow upwards until it penetrates the diaphragm and empties into the lung? I have seen this happen in some of my own cases. Even when it empties into the gut it does not mean freedom from recurrence, by any means; two cases terminating in this way in my experience had to be operated upon later for recurrence.

On April 16th, 1896, I read a paper before the Medical Association of Georgia (13). As the basis for that paper, I took 558 cases from literature and tabulated them, and since then I have examined 1,011 in the same way, of which 878 resulted in abscesses, perforation, peritonitis, etc.

The following table gives the pathological details:

Perforation or abscess	315
Perforation or ulceration	17
Perforation or peritonitis	69
Perforation or concretion or foreign body	183
Perforation or gangrene	68
Perforation or gangrene and concretion	18
Perforation or inflammation	6
Perforation or with hardened fœces	17
Perforation or concretion and peritonitis	27
Perforation or foreign body and peritonitis	15
Perforation or Lumbricoid worms	6
Perforation or hernia	5
Perforation or rupture into bladder, rectum, or vagina	15
Total	711

Foreign bodies	26
Fœcal concretions	5
Inflammation	36
Enteroliths	3
Gangrene	34
Gangrene, with concretion	8
Inflammation, with concretion	4
	116
General peritonitis, with foreign body and gangrene	22
General peritonitis, with ulceration	29
	51
Total number of cases	878

This leaves only 133 cases in which the condition was unknown or in which no definite pathological condition was found.

As the result of this study, I tabulated the conditions usually met with as: First, cases in which the disease follows trauma. Second, cases following septic inflammations in other parts of the body, such as salpingitis in the female, post-partum septic inflammation of the uterus, typhoid fever, tuberculosis, etc. Third, direct infection of the mucous membrane of the vermiform appendix by its contained bacteria. Fourth, alterations in its position and shape, so as to occlude its lumen, preventing the escape of its natural secretions and contained intestinal contents. Fifth, alterations in its position, and pressure upon its mesentery by growths and impacted fœces in the cœcum. Sixth, alterations in its position or shape, so as to shut off its blood supply. Seventh, foreign bodies, including fœcal concretions.

A most interesting case of the sixth division was operated upon by me at the New York Post-Graduate Hospital this winter. The patient was a boy, about ten years of age, who was sent to me by Dr. Shuftel. He had been ill only two or three days, and on admission his temperature was only 101°, but his pulse was over 130,

and weak. A tumor could readily be mapped out in the right iliac fossa. Operation was performed immediately, and the appendix was found to be gangrenous from the tip to within half an inch of its base. The gangrene was due to the appendix having been twisted three times on its own axis, so that its mesentery was wound around it, forming a firm band and completely strangulating it.

Taking this classification of cases, the question of treatment in each set naturally interests us. A traumatism in this region does not differ in any essential from a traumatism in any other part of the abdominal cavity producing contusion or injury of the intestine, and should be subjected to the same rules, and to the same treatment. So, too, in rheumatic, septic, or infectious disease, the treatment would be the same as for similar lesions anywhere else in the abdomen. If the obstruction to the circulation is prolonged or permanent so that the vessels are occluded, it is perfectly evident that there can be but one result, sphacelation of the whole organ beyond the point of circulatory obstruction. It is not necessary here to have any septic infection in the beginning, but the sphacelation of the organ will naturally produce the same train of symptoms that would follow gangrene elsewhere. It offers a proper field for the development and growth of the different bacteria, and in a very short time it naturally becomes the seat of pathogenic and pyogenic changes. Naturally, this evolution depends upon the rapidity with which the disease progresses. If the obstruction is complete, the gangrene is rapid, and perforation occurs before the appearance of an abscess or before inflammatory changes are sufficient to agglutinate the folds of the intestine lying about the iliac fossa. The natural result of this is perforation into the general peritoneal cavity, with all the

symptoms of an acute general peritonitis. If, on the other hand, the progress of the disease is less rapid, agglutination of the surrounding folds of the peritoneum will wall off the appendix, and, then, if perforation results, the general peritoneum is protected. This is true of all the other conditions. The longer the irritation and the less rapid its extension, the more certain is the involved area to be protected by inflammatory adhesions.

The formation of a tumor, then, is not solely, and in every case, due to the presence of an abscess. In the great majority of cases, it is impossible to recognize fluctuation. In the earlier stages, and when the disease progresses slowly, inflammatory lymph, without the formation of pus, may be thrown out around the diseased organ, forming an almost impenetrable barrier to the escape of the contents of the appendix into the peritoneum, and producing a well-marked induration. It does not necessarily follow that because a tumor is present in the right iliac fossa the case will not resolve and recover without operation. On the contrary, a simple inflammatory induration and adenitis, following a not too active germ infection, may, on the disappearance of the original point of infection, be so well provided for by the natural conditions that it will gradually be absorbed, and frequently completely disappear, provided no secondary attacks occur.

The patient is not always safe, however. This probably accounts for many of the cases, of which Ewald speaks, of resorption of pus, even when the tumor seems to have developed so slowly as to be comparatively well walled in by the agglutinated fold of peritoneum. The erosion of the pent-up fluids may cause perforation into the peritoneal cavity, and, naturally, if this happens, a virulent septic peritonitis must result. Spontaneous evacuation into the lung, bladder, intestine, or bowel

may follow, but it is hardly safe, in view of the rapid mortality following perforation into the peritoneum, and the risk of such an accident, to take any chance of waiting for this to occur. If an examination of the blood shows marked leucocytosis, it will help in the diagnosis of abscess.

I do not suppose that the question of the advisability of operation in this disease, in cases where the appendix is gangrenous, where abscess has already formed, or where a fœcal concretion or a foreign body is probably present, would be opposed by anyone. It must be perfectly obvious that in these cases, unless the causes of the irritation are removed by mechanical means, the patient is in imminent danger and likely to develop general septic peritonitis at any moment. By a reference to the table it will be seen that these cases make up the vast majority of all the cases of appendicitis.

It is also probable that in the present state of surgery the majority of medical men are in favor of surgical intervention in cases tending toward general peritonitis, even though the symptoms do not point to perforation or abscess-formation, with the hope that drainage of the abdominal cavity and the removal of an irritating focus of disease may forestall what would otherwise be a fatal complication.

This leaves a comparatively small number of cases in which the question of what should be done would be debatable. For these reasons, I do not believe that any case of appendicitis should ever be considered as purely medical.

Given a case of appendicitis, whether it has a history of recurrence or not, the medical attendant should be prepared for operation at any moment, and if not himself an expert abdominal surgeon, he should at once arrange with some one, who has had the necessary experi-

ence, to hold himself in readiness to operate.

It has been abundantly proved that the best time to operate is in the interval between attacks, but it is sometimes very difficult to say whether, if we wait, the patient will live to have an interval. I know of no absolute rule for this, and, personally, I am guided more by the condition of the pulse and the abdominal rigidity and tenderness than by the temperature. If the pulse is rather weak and rapid, the countenance very anxious, the tongue badly coated, the abdominal tension great, the induration, as felt through the rectum, excruciatingly painful, and the leucocytosis marked, I believe delay to be dangerous. Operate then and operate at once.

In the course of my clinics at the New York Post Graduate Medical School and Hospital on the subject of appendicitis, I am in the habit of giving this rule: In all cases of appendicitis in which, after twenty-four hours have elapsed, the symptoms are progressing unfavorably, operate and operate immediately, but in those cases in which there is an undeniable amelioration during this time, wait until the interval, and operate then. In recurrent cases, operation should be the invariable rule.

We are forced to the conclusion that operation is the only rational course to pursue, for, as McBurney has said "no purely medical treatment of actual value in preventing or controlling the disease has yet been presented to the profession," and he might have added that with the definite information we now possess of the eitology and pathology of the disease none will be presented until, in the natural course of events, the appendix is evolved out of existence.

The next question then is, how to operate. The evolution of individual surgical opinion on this subject is interesting. Most of us have begun by considering the

question from a most conservative stand-point, only operating under the severest necessity; then, with increasing experience and a riper personal knowledge of the progress of the disease, we have found ourselves gradually advising earlier and more radical procedure. Is this the result of mature thought, or is it the rashness born of familiarity? The tendency of all surgeons, who once begin to work in this field, toward the same general conclusions, namely, that the earlier the operation, the greater the number of complete recoveries and the shorter the loss of time, proves that these conclusions are the result of ripe experience.

In 1827 Melier[14] described the forms of appendicitis and mentioned both perforation and recurrence as possible complications. He suggested the possibility of treating the disease by surgical means "if it were possible to establish the diagnosis." In the case of Hancock[15], 1847, so often quoted as one of the earliest operations for appendicitis, the incision was made "from the spine of the ilium to the inner side of the internal abdominal ring to relative intestine, if found, or omentum, or if pus, to evacuate it." "Upon opening into the abdomen a quantity of excessively offensive turbid serum, with fibrinous flocculi poured out and also patches of false membrane." This was, therefore, not a planned operation for appendicitis, but rather an exploratory laparotomy. Parker[16] also operated about the same time, but did not publish his case until 1867. He then advocated cutting down to the peritoneum and puncturing with an aspirating needle. Parker operated again on a patient of Burge's[17] and then Leonard Weber[18] operated by cutting down to the peritoneum and waiting for the abscess to rupture. Buck, in 1874,[19] reported three cases, togeth-

er with one each by Krackowizer, Ward, Sands, Kelsey, White, and one of his own. He varied the technic by enlarging the trocar puncture by incision with the knife. It should be noted that in 1856 Dr. George Lewis[20], in an article on abscesses in the appendix vermiformis, said in regard to treatment that he was inclined to favor the making of a free incision down upon the tumor. Parker's method continued to be the mode of operating, and in July, 1880 [21], a reporter of twenty-six cases, said: "in every case that has fallen under my observation the operation has been performed essentially in the manner recommended by Dr. Parker." "An incision several inches long, and usually parallel with Poupart's ligament, was made over the most prominent part of the tumor, through the skin and subcutaneous fat. Subsequently, the deeper layers were divided until the fascia-transversalis came into view. If fluctuation then became evident, the abscess was immediately opened, otherwise the fascia was peneterated in various directions by means of a hypodermic syringe until the seat of the abscess was discovered, when the operation was completed by entering a narrow bistoury alongside the needle." He adds at this time that "an external incision of two inches will afford ample space; and the wound should grow narrower as it increases in depth, while the direct opening into the abscess need not be longer than will readily admit the forefinger." Bull[22], in 1873, read a paper in which, while still advocating the method proposed by Parker, he brought out the fact, emphatically, that as soon as suppuration was made out the tumor should be incised. This was the general position of surgeons in 1882. At this time, the truth was just beginning to dawn; the profession were just realizing that, instead of the cœcum being the point of involvement, the disease was almost invariably con-

fined to the vermiform appendix. This evolution in opinion was not sudden, but gradual; the accumulating experience of operators with the so-called peri-typhlitic abscess was revealing the true state of affairs. From an operative point of view the field was clouded by the assertion made by Sands that these abscesses were always extra-peritoneal, developing in the cellular space below the meso-cœcum and spreading from that point along the fascial planes of the back of the abdomen outside of the peritoneum. His advice in regard to operating and trying to avoid the peritoneum was followed by many, and as it delayed the thorough inspection of these appendices by this brilliant surgeon, it delayed by just so much the true knowledge of appendicitis. Therefore, when Biermer, in 1879, Matterstock, in 1880, and Talamon, in 1882, described the part played by the appendix in the production of peri-typhlitis, surgeons were almost ready to accept the proposition. In 1835 Treves exploded the extra-peritoneal theory, and in 1836 and 1868, Fitz, of Boston, conclusively settled the position of the appendix in diseases of the right iliac fossa. Kronlein, in 1884, and Sands, in 1887, conducted the first planned operations for the removal of the appendix. Treves, of London, advocated a similar procedure in the latter year.

A resumé of appendicitis from this time until the present would be practically a history of American surgery and American attainment in abdominal surgery. In 1891[23], in a discussion before the New York State Medical Society, McBurney took front rank as the exponent of appendiceal surgery, a position he has continued to hold up to the present time. McBurney's point was as important from the position of the diagnosis as his plan of operating is to the surgeon of the present day. He said: "I have found the *exact* locality

where the greatest sensitiveness to pressure exists to be a valuable means of diagnosis, so that in every case of abdominal pain, not otherwise satisfactorily explained, I make a careful search for it, and in the first hours of all attacks of appendicitis, if firm pressure is made with the finger tip, and especially if the patient is made to cough while such pressure is being exerted, it is invariably easy to determine that the most sensitive point is a definite one in most cases. This point is very accurately determined. In the adult, it is from one and a half to two inches inside of the right anterior superior spinous process of the ilium, on a line drawn to the umbilicus. In children, it is, in proportion to their size, so much less distant from the spinous process."

Edebohls[24] also made an important addition to our diagnostic resources when he, in 1894, described the method of palpation of the vermiform appendix. In carrying out his procedure the patient must lie on the back. Placing three or four fingers of our right hand flat on the abdomen, we feel for the margin of the right rectus muscle, in the line between the navel and the anterior superior spine of the ilium. The fingers are introduced with a light steady pressure under the margin of the rectus until we feel distinctly the pulsation of the common iliac artery. The appendix is felt, as a rule, just outside the artery, its insertion about an inch distant, while its tip often crosses the artery. We move the fingers slowly outward as soon as we feel the pulsation of the artery, and note with care the condition of the posterior abdominal wall—that is, the ileo-psoas muscle covered with the iliac fascia. This is the point of resistance against which we compress the appendix and which makes it possible to palpate it."

The operation divides itself naturally into that for the non-suppurative and the suppurative cases. When, fol-

lowing this discussion at the New York State Society, operations became more frequent, it was soon evident that the large incisions and the interference with the integrity of this portion of the abdominal wall rendered the patient extremely liable to hernia through the cicatrix. This led to a general revision in the method of operating, and a study of the best means to avoid this accident. Kammerer[25], Mynter, and others, at this time suggested an incision just under the outer edge of the rectus muscle, drawing the muscle inward. The disadvantages of this incision are that when the sheath of the rectus is opened branches of the deep epigastric artery are cut, and this often gives a hemorrhage necessitating a prolongation of the incision to control it. The incision is also at a greater distance from the appendix itself, especially, if it is curled under the cœcum and bound down by adhesions.

Willy Meyer[26] has recently suggested a method of opening the abdomen in complicated cases of appendicitis, which he calls the "Hockey-Stick Incision." He makes first a modified McBurney incision and then "after having entered the abdominal cavity, it will become evident whether or not the incision is large enough to enable us to do the necessary work. If the appendix is found to be situated inward or downward, and a wider entrance needed, the incision can be lengthened straight upward as far as the surgeon thinks proper." With reference to lengthening the lower end he proceeds as follows: "Entering the peritoneal cavity at the lower angle of the wound with my left forefinger, I slide it inward to where the epigastric artery pulsates. I then curve the lower end of the incision by drawing the knife in a horizontal line, that is to say, perpendicular to the median line of the body, thus forming a rounded-off angle of about 135 degrees. The entire wound then has

the shape of a hockey-stick. In the horizontal part of the incision care is taken not to injure the epigastric plexus. It is primarily caught between two forceps, then cut and ligated. The incision ends at the border of the right rectus muscle. If still more room be needed, the belly of the rectus can easily be drawn inward, and the fascial layers beneath it incised in the same direction, as the case may demand. In pulling the borders of this wound apart, it will be seen that an easy access has been gained to the organs situated within the small pelvis."

Personally, I prefer a combination of the Morris[27] and McBurney[28] incisions. A curved incision one and a half inches long is made so that the center of the incision is directly over McBurney's point. The aponeurosis of the external oblique is then carefully exposed and split in the direction of its fibres, never cut. This brings the muscular surface of the internal oblique into view. These fibres are also split, as they run at right angles to the fibres of the external oblique. Now, instead of using the retractors, as suggested by McBurney, guy-lines of strong silk or cat-gut are put into position, one on each side of the divided internal oblique, and taking up as much of the divided muscle in each stitch as possible. This exposes the transversalis, which is also split in the direction of its fibres and also caught by two guy-lines. The transversalis fascia and peritoneum are now taken up together and divided, as far as possible, in the long axis of the wound. By the use of the guy- lines (they taking up less room) in place of retractors, we are able to get along just as efficiently with a small incision. If now it becomes necessary to enlarge this wound, the fibres may be split and the skin incision enlarged, until the muscular fibres are separated, from insertion to attachment. In closing the wound, we should always re-

member that the aponeurosis splits more and more as we manipulate the wound, and we should therefore draw the skin down and then up until we are certain that our sutures have reached the highest and lowest points of separation.

The management of the appendix is also important. Some operators are satisfied simply to ligate it, and then after cauterizing the stump to render it aseptic, to drop it back into the abdomen. Others have adopted the purse-string method of Dawbarn[29]. This consists of a circular continuous Lembert suture (silk), which is introduced through the superficial layers of the cœcum, a quarter of an inch from the insertion of the appendix, and tied loosely; the appendix is then amputated half an inch or more from its insertion, and then dilated, by introducing a pair of fine forceps into the cœcum and opening the forceps. The stump of the appendix is then seized by fine-toothed forceps, and invaginated half an inch into the cœcum, while the cœcum is pressed against the forceps by the fingers of the other hand. The circular suture is then tied firmly and the toothed forceps removed. Edebohls advocates invagination of the whole appendix into the cœcum. I have always been in the habit of closing the appendix as follows: Having tied off the meso-appendix in section, and cut it free from the appendix, I cut through the peritoneum covering the appendix, about half an inch from its base. This peritoneum is then pulled back until about a quarter of an inch of the cœcum is exposed. Then, a fine curved needle, armed with 00 cat-gut, is passed through the muscular coat of the denuded cœcum, and base of the appendix, and brought out about a sixteenth of an inch below the point where the peritoneum was cut. The needle is then carried across and inserted the same distance below the peritoneum, and to one side of the

denuded mesenteric attachment, and carried down through the muscular coat, until it comes out at the margin of the reflected peritoneum. The needle is then carried to the other side of the mesenteric attachment, where a similar stitch is taken, coming out on the cœcum about a quarter of an inch from the original insertion. The field of operation is then carefully protected by a piece of gauze, and the appendix removed at the line of section of the peritoneum. Its lumen is then swabbed out with pure carbolic acid, then with alcohol, and dilated. Now, while the operator holds the two loops of cat-gut by means of a pair of forceps so that they will pull on the margins of the appendiceal stump, the assistant draws the two ends taut. This invaginates the whole stump of the appendix, and draws the cœcum together over it at the same time. The two ends of the stitch are now tied, and the reflected peritoneum is turned back, so as to completely cover the denuded portion. This is closed over by means of a continuous Lembert stitch, which may be carried down to cover the cut places in the mesentery, if that is considered desirable.

In cases of suppuration we should be invariably supplied with peroxide of hydrogen at 10 to 15 volumes. As soon as the pus is found, the peroxide should be poured in until it is evident from its action that all pus has been destroyed. At the Post-Graduate Hospital, this is routine practice in all cases of appendicitis, accompanied by abscess, or general peritonitis. I am confident that by its use I have saved cases that would otherwise have been inevitably lost. Within the past month I have operated successfully upon a case of general peritonitis in which four pint bottles of peroxide were used in the general peritoneum. The froth and foam is then washed out with hot normal saline solution.

There can no longer be any question in regard to the advisability of operating in appendicitis. This is no place for the recital of cases, nor have I the time, but my own statistics now show 160 appendectomies, with four deaths, 2.62%. This, compared with any medical statistics that can be advanced, will, I think, offer a sufficient excuse for the early and radical operation for disease of the vermiform appendix.

24 West 50th Street.

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APPENDICITIS,

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At the meeting of this Association last year in Mobile I read a paper attempting to present an outline of the literature of the subject of Appendicitis, and of the history of the development of the operation. My paper presented also somewhat in detail the histories of sixteen cases upon which I had operated up to that time; out of this number only one died. This man had a large abscess of a very poisonous quality which ruptured on the fourth day. Two hours after the supposed rupture the abscess was incised and a good deal of pus was let out and it was then hoped that the inflammation was localized; this was erroneous, however, and he died at the end of two weeks. I think now that bolder measures would, perhaps, have been more successful. As there were unmistakable symptoms of a rupture of a very virulent abscess, the incision should have been made much larger, the appendix removed, and the abdominal cavity flushed with hot salt solution, and all the infected areas generously packed with gauze.

The fifteen cases which recovered comprised eight cases of extra-peritoneal abscess which were incised and drained without any search being made for the appendix, and seven cases which were intra-peritoneal and where the appendix was removed and the wound closed, except for a small wick drain.

hospital asking that something be done for her; her temperature was down to 100° F., and pulse 110. About half a pint of pus was evacuated, and it was found that there was a large opening directly into the bowel through which large quantities of blood and mucous came, following pus, six hours later the pulse ran up to 150, temperature 104° F., and the bloody stools became more frequent. Thirty-eight hours after the operation she had a very copious hemorrhage from the bowel and from the wound which, since the operation, had been passing the greater part of the bowel contents, and immediately collapsed and died four hours afterward. The autopsy showed the abscess was caused by a slough of the colon an inch in diameter, and that the appendix was perfectly healthy in the free cavity of the abdomen. This case, of course, was not one of appendicitis. The family physician in this case made the diagnosis of appendicitis, as I did in the other case, before he discovered the dysentery. In both cases there was a tumor from the beginning with pain, tenderness, chills and nausea and vomiting.

Another interesting case was in a man of fifty-two who had had three mild attacks of appendicitis and one severe one. Four months after the severe attack he was taken one morning at 7 o'clock with very much worse symptoms than he had ever had before; at 2 p. m., temperature was 104° F., pulse 120, when operation was begun. It was found that an abscess containing an ounce or more of pus, which he had evidently been carrying about since his last attack, had ruptured and set up a general peritonitis; he was quite fat and the bowels were distended very much, so that the incision made was about nine inches long; a quart or more of sero-pus was washed out of the abdominal cavity, very slight beginning lymph deposits were wiped away and the ab-

domen generously packed with gauze. Two inches of each end of the wound were sewed up, the rest was left open. A hernia was avoided by keeping the wound more and more drawn together with adhesive strips during the six weeks required for healing, and applying a tight bandage since then.

L. P., aet. 23, white, a very frail, hard-working consumptive is the only so-called fulminating case I have seen. He had been having pains in the abdomen for a week but kept at work. He was brought to the hospital at 6 p. m., September 7th with the history that he had been taken very much worse early that morning. On admission he was fairly comfortable with temperature normal but pulse 110, at midnight he had a sudden accession of pain and his temperature went up to 104.5° F., and pulse to 140. A rupture of the appendix was diagnosed, and one hour later the abdomen was opened; the appendix had a hole in it, and the abdominal cavity contained several ounces of dark, foul-smelling, thin sero-pus, the appendix was removed and the abdomen thoroughly flushed and drained, and although his pulse was suspiciously rapid he was put back to bed with a good deal of confidence that he would react and recover. The temperature fell the following morning and so did the pulse but not proportionately, the abdomen was flat and the bowels moved once or twice daily naturally. On the 3d day the temperature began rising gradually and he grew gradually weaker, the pulse being bad all the time until on the fifth day he died rather suddenly. The autopsy showed that there had been no reaction whatever, no drainage, no distension, not an adhesion anywhere. The abdomen contained about the same amount of foul fluid and the stitches of the stump had cut through and the stump was leaking. I believed then as now that the rupture

of the appendix had taken place in the morning at the time the attack was supposed to have come on instead of at 12 o'clock at night, and that at the time of operation the peritoneum was already overwhelmed and was little different from that of a cadaver. The veins were black and the peritoneum was rather a lead color than the rosy red hue which should denote a beginning peritonitis; the inflammatory reaction.

Another case was E. A., a white man aet., 28, he had been sick four days when I saw him in consultation. He gave this history: July 17th last he had a severe pain across the epigastrium which changed and got lower down in the right side but with no tenderness. July 19, 20, 21 and 22, gradually improved and was up and went to his office on the 23d. On July 24 he was in bed again and sent for a doctor; he continued about the same with a little fever and a pain along the border of the ribs and in the loin. I saw him for the first time July 29, twelve days after the onset, he then had some tenderness along the border of the ribs with hard muscles and slight fever, pulse 90. As he had been sick so long and no abscess could be made out, and as he seemed to be better it was advised to wait and see how he was next day. A consultation was not again called until August 7th, or nine days later, he then had a very large abscess prominent all along the border of the ribs. He was removed at once to the hospital and an incision made over the site of the gall bladder and about a litre of pus evacuated. The liver was displaced downward to a marked degree and formed the posterior wall of the abscess. Three days later another incision was made four inches from the first one along the border of the rib near the loin, these two incisions drained freely and, until the 15th, the septic conditions seemed controlled, he then began to

have a temperature of 101 but the pulse was always below a hundred. On the 19th at night he suddenly began expectorating large quantities of bloody pus, and his temperature went up to 104. It was thought then that an appendiceal abscess had passed up behind the colon and liver and down in front of the liver, and that the incisions had not sufficiently drained the pus from between the diaphragm and liver, and this part had ruptured into the lung. The sepsis was very rapid after the rupture into the lung and he died five days later on the 24th, or five weeks after the beginning of the attack. An inspirator was introduced repeatedly into the subdiaphragmatic space after the rupture into the lung but no pus was found. An incision was not made because the lung seemed to be discharging the pus so freely it was thought useless to attempt it, particularly as he had an extensive septic bronchitis which seemed to account fully for the septic condition. The autopsy revealed, however, a large accumulation of pus above the liver which ought to have been found and evacuated; the appendix was a very long one and lay on the iliac muscle with its tip, showing the rupture which caused the absecess, lying almost against the kidney.

The last case I shall mention was that of F. W., aet., 12, who was brought in with an abscess of three weeks' standing which occupied the whole pelvis and the entire right side of the abdomen. He made a complete recovery after having four incisions made for drainage, at first one in the median line above the pubes, and one over the sight of the appendix, two weeks later one in the loin and one at the right of the anus. He then recovered without any further trouble after about eight weeks in bed in all.

My total experience in appendicitis during the last four or five years has been about eighty cases, of which

I have operated upon thirty-one, with five deaths, or, if we exclude the two cases of dysentery, which were errors of diagnosis, we have twenty-nine cases with three deaths. Of these three, one was an abscess with a gangrenous appendix and profound sepsis, and the other a large, obscure, diffuse abscess, and the other a fulminating one. The first two might have been saved by more radical cutting. All of them could most certainly have been saved had they been operated upon early. In all the patients with the localized extra-peritoneal abscess which were incised and drained, and in all those intra-peritoneal diseased appendices which were removed, one case of ruptured abscess and pronounced beginning peritonitis, and one case with rupture and slight beginning peritonitis, all recovered.

Of about fifty patients which I have seen treated medically, six have died. This seems a small death rate but it is much larger than it seems when it is remembered first that the greater number of those were of such a mild type that operation was not thought justifiable. In fact they were nearly all treated medically on the advice of a surgeon or surgeons accustomed to operate when necessary. Of course, of the forty-four cases which recovered a certain number will have repeated attacks until operated upon with or without losing their lives, another certain per cent. will lose their lives with or without being operated upon.

It is pretty well proven by the experience of every surgeon that no surgeon advises operation upon every case he sees, although this does not at all affect the fact that early operation in all cases will give the lowest death rate. All cases are not operated upon because many are so mild in character that there is often an element of doubt in the diagnosis. A patient has a sharp pain in the abdomen followed by general cramping for

an hour or more, then a little tenderness at McBurney's point, possibly the patient has vomited or has had a slight chill and a little fever with slightly increased pulse rate, a dose of morphine and a purgative are given or the bowel washed out, and all symptoms disappear rapidly, except, perhaps the tenderness lingers for a day or two. In such a case it is almost certain that the appendix was the seat of the trouble, but it is possible that an operation would reveal an apparently healthy appendix. It is possible that it was a mere colic of the appendix caused by a little fecal matter, solid or liquid being incarcerated therein, which by a lucky twist or roll was finally expelled into the bowel again and the parts resumed their normal condition.

I operated upon one young man who had such intense periodical spasms of pain recurring about every ten minutes that in the course of the night he was given two grains of morphia and six ounces of chloroform with little or no relief being afforded him. The appendix was very little inflamed and non-adherent, but contained two hard fecal masses, and was in a state of violent contraction at the time it was removed, fourteen hours after the attack began. I believe there are very few young adults who do not occasionally have a slight colic of the appendix, many of them have had sharp attacks without ever having the trouble go on to the inflammation stage. Again, there may be a sharp colic of the bowel in this neighborhood and in women a uterine or ovarian or tubal pain often simulates, slightly, an appendical pain. My experience proves that we should also be careful to exclude dysentery.

Offsetting the many light and simulated attacks of appendicitis, we have many cases of dyspepsia and backache and so-called kidney trouble which finally turn out to be appendicitis.

Pain after eating, with or without indigestion, in a healthy-looking patient is particularly suspicious. A number of my patients have been entirely relieved of a long-standing dyspepsia by an operation for an acute attack of appendicitis. One patient, whom I operated upon in his first attack, told me that he had never had any such trouble before, but that he had suffered for a long time with his right kidney and ureter. Although the operation was done only 36 hours after the attack came on the appendix was found to be lying in a pus bed behind the cecum, and bound down by such dense adhesions as would suggest a very chronic state of affairs. Of course, this it was and not the kidney which had caused the pain all the time as he has had none since. In dealing with these mild cases the most important thing to discover is when to operate, and it is very important also for operators to have some rule to go by, having a rule means that they will deviate from it in some cases. My rule is, that if the onset is very mild, such as to suggest a colic of the appendix or cecum or a doubtful diagnosis, and the patient is seen in the very beginning of the attack, to wash out the colon, nothing is lost by a few hours' delay, and it is important to have the bowels empty in any case. If this brings away a large quantity of fecal matter, I should give a small dose of morphine to relieve any pain he has and let him rest, taking the pulse and temperature every four hours. If the enema does not unload the bowel, he should have a large dose of oil. If it is mere colic unloading the bowel should relieve all symptoms, and the pulse and temperature should be normal in a few hours. Even if it is an inflammatory attack from the beginning, the purgative and morphia may apparently entirely relieve the symptoms, but if the pulse and temperature are carefully noted they will indicate the true condition very soon, and if they are not normal 12 or 18

hours after the purgative an operation should be done. If these mild attacks are seen for the first time later than the first day, it may still be safe to wash out the colon, if, however, this has already been done and there still remains a little tenderness and ever so slight elevation of temperature or acceleration of pulse the operation should be done without further delay. It should be done at once in any case where there is a tumor. The risks of delay and indulging in medical treatment should never, I believe, go beyond the above limitations, except where the surroundings are so unfavorable as to make the operation itself one of great risk. We might also take much risk in medical treatment with a person with a grave heart lesion or in the case of a very fat person. On the other hand even the mildest cases out in the country when seen by a competent surgeon should be operated upon at once or removed to where the patient could be in easy reach of surgical attention, preferably a hospital in the city, rather than leave him out of reach of help in case he should get worse. Of course, operation during the quiescent period, a few weeks after an attack, gives the best results as well as the lowest mortality; at this time the wound can nearly always be closed without drainage. Operation should be done after the first attack, or even where the patient has had no defined inflammatory attack, if there is tenderness at McBurney's point or a tumor or pain or both or all three, whether or not there is fever or acceleration of the pulse. If all the symptoms clear up promptly in a first attack after a purgative, there may not be much risk in waiting for further developments, always provided, however, that the patient is in easy reach of a surgeon, but after the second or third attack, whether any symptoms remain or not, operation is imperative, and the medical man should refuse to take any responsibility under medical treatment if operation is refused.

INJURIES PRODUCED IN MODERN WARFARE.

By R. N. Pitts, M. D., Montgomery, Ala.

Member of the Medical Association of the State of Alabama.

It was my good fortune to be in charge of the surgical work of the First Regular Infantry during the Santiago battle. Based upon this recent experience, I shall endeavor to present some views on: Injuries Produced in Modern Warfare.

The civilized nations have, from a humane standpoint, lessened the calibre of their small firearms, and have ruled out all explosive bullets, namely,—the dum-dum, brass-mantled and hollow-nosed—the object being to place as many of the enemy "hors-de-combat" as possible, without mutilating them to any great extent.

The bullet now generally in use is eight millimeters in diameter and is composed of lead, which is encased in a nickel or steel jacket. The bullet possesses the power of retaining its shape, until it comes in contact with hard substances in its rapid flight.

No other firearms have ejected their bullets with the same velocity, penetrating force, and range, as the Mauser, Krag-Jorgensen, and the Lee-Metford—these being the guns that have figured on recent battlefields.

Before the modern bullet had been used in actual military practice many experimenters were apprehensive that, when fired into liquid, or semi-liquid cavities, such as the abdominal and cranial, it would prove explosive in its effect. They based their views on experi-

ments they had made on cadavers, dead animals, and vessels filled with liquid and hermetically sealed.

Two plausible theories were advanced as to the cause of these explosions, which frequently occurred:

1st. That the great velocity and momentum produced a rise in the hydrostatic pressure within the cranial and abdominal cavities.

2d. That the bullet rotated on its short axis with such rapidity that it produced centrifugal force sufficient to give it the explosive effect.

By 12 o'clock on the first day of the fight, I was fully convinced that these fears were not well-founded . I had dressed the wound of one of the regimental commanders, the ball having entered on the left side of the abdomen at a point midway between the umbilicus and the central portion of Poupart's ligament; the bullet passed through the body, and it was impossible to distinguish between the points of entrance and exit.

Upon examination, his pulse and respiration were practically normal, and otherwise there was no evidence whatever of shock. It was with difficulty that we induced him to be carried to the rear on a litter; recovery was complete, and without any untoward symptoms.

Acting Assistant Surgeon Parker reports the case of a soldier who sat up smoking a cigarette on the second day after a bullet had passed through his brain.

From a special correspondent at the seat of war in South Africa, to the "London Lancet" of December 9th, 1899, we have the following:

"The great majority of the cases were, of course, surgical, and the results of the Mauser bullets, but a few amongst them were Martini-Henry bullets, and the difference was extremely marked."

"In most of the cases it was very difficult to determine the aperture of entry and that of exit, in wounds produced by the Mauser."

Sir William MacCormac and Mr. Treves have reported some very remarkable recoveries, namely,—"Men shot through the brain have been only temporarily inconvenienced; the abdomen has been pierced from before, backward, and from side to side, and recoveries have ensued; the bladder and stomach have been traversed and the men have continued to charge."

"It is abundantly clear that in a long campaign a man might be shot a half dozen times and return to duty as good a man as ever."

Mr. Maken, a consulting civilian surgeon, now in South Africa, also speaks in a letter to the British Medical Journal of the benignity of the Mauser and Lee-Metford bullets.

It is the consensus of opinion amongst military surgeons that where the bullets produced much damage, the fact was due to the bullets having been rendered defective or irregular by striking rocks, or some other hard object before hitting the intended victim.

From my observation, and from the reports of others, the bullets rarely carried particles of clothing or other foreign substances into the wound.

The question of diagnosis claims brief consideration. The probe has been properly superseded by the X-ray. To my mind thousands have succumbed to infection produced from the meddlesome use of the probe, and to improper probing with the finger.

Senn's hydrogen gas test is not devoid of danger; the two and a half pounds of pressure to the square inch which it produces is liable to force fœcal matter, laden with such micro-organisms as may be in the alimentary canal, through the perforation into the general peritoneal cavity.

It is possible that the method will cause a rupture, where there are cicatrices, as a result of typhoid fever

and dysentery, or where there are contusions of the intestines, due to the grazing of the bullet.

A short discussion of treatment will close this paper.

The first-aid-packet, when properly applied, answers a two-fold purpose.

1st. It is potent for stopping hemorrhage; 2d. It keeps the wound from becoming infected, until a permanent dressing can be applied, or the proper operation performed.

The first-aid-packet consists of a gauze, a triangular bandage, safety pins, and one dram of boracic acid, all of which are enclosed in wax paper, not unlike, and about the size of, a fire-cracker package.

In the treatment of gun-shot wounds of the abdomen, unless we change the hospital system as regards location, it is best not to operate.

The hospitals in the Santiago campaign were about four or four and a half miles from the firing line, where most of the casualties occurred.

The main reasons for operating in perforations of the intestines, and in injuries of the abdominal viscera, are to check hemorrhage, and to keep back an infectious peritonitis, which can only be done with the greatest success immediately after the wound has been received.

A mortality of one hundred per cent. for such operations in the Santiago campaign will bear me out in this declaration.

The only way such a fearful mortality could be lessened would be to provide a corps of surgeons equipped for such work, and establish a hospital for such cases as near the firing line as possible. The hospital corps on the firing line should then be instructed to convey all cases of abdominal wound as promptly as possible to the hospitals so established.

Intestinal perforations should be dealt with according to Lembert's method, or by re-section.

In simple perforations, sutures should be done at right angles to the long axis of the intestine to prevent constriction.

The Murphy button, when quick work is imperative, is indispensable, but, to my mind, the end to end anastomosis is the operation in which re-section is done, using the Czerny-Lembert suture.

Flushing the abdominal cavity with a sterile solution, and drainage for twenty-four hours, concludes the after-treatment of such wounds.

In flesh wounds, the mere enlargement of the openings of entrance and exit and an antiseptic dressing embrace what is required.

It has been stated that flesh wounds heal kindly, the fact being due to the high temperature of the bullet rendering the wound aseptic. The walls along the track are in opposition and plastic lymph begins early to seal the injury.

Injuries of the head require but few operations, as the bullet rarely lodges in the brain, but where it lodges in the cranial cavity, and its position can be ascertained, operate when the patient's condition, and the location of the bullet, warrant such action.

We will not mention wounds produced by the solid shot of cannon, or by schrapnel, grape, or canister. There is nothing new to write about them. They figured when the star of the Arch-Angel of War set behind the military horizon at Waterloo.

A PLEA FOR EARLY OPERATION IN INGUINAL HERNIA.

By W. F. Westmoreland, M. D., Atlanta, Ga.

Professor of Principles and Practice. and Clinical Surgery, Atlanta College of Physicians and Surgeons; Ex-President Medical Association of Georgia and of the Tri-State Medical Society; Ex-Vice-President American Medical Association.

You will allow me to thank you for the very kind invitation which has conferred on me the honor of reading a paper before this Association, and the personal pleasure of meeting its members, and participating in this session.

In selecting my subject I was governed by the idea that it should be one in which the medical profession would feel a common interest.

The motif of this paper is a plea for the more radical treatment of this distressing condition, and to get the profession generally interested in educating this class of suffering humanity to the same view. For, the laity, as a rule, believe that the operations for the radical cure of hernia are very dangerous, and at best only a temporizing expedient.

The frequency of hernia and the mortality arising from it will prove a surprise to those who have not investigated this phase of the subject. Five per cent of the total population, or four millions of people in the United States, suffer from this dangerous affection in a greater or less degree,(1), and one death in every six hundred from all causes is due to hernia(2). In

Great Britain hernia caused more deaths than occurred from all uterine diseases (3).

Ninety-three per cent. of all inguinal hernias are oblique.

The relative frequency of inguinal hernia to all other varieties is marked. Among 100 men who are ruptured 97.5 per cent. are inguinal, and among 100 women who are ruptured 60.3 per cent. are inguinal (4).

Hernia is treated by mechanical and operative methods. The mechanical method, or use of the truss, can be considered as curative and palliative.

The use of some form of truss is probably as old as the human needs. "Poucet described a recently discovered ancient Phœnician statuette of a god, at least 3,000 years old, which represents 'unmistakably' several ruptures on the abdomen, with a double hernial bandage resembling those now in use."

From supplying the primitive requirements of this pre-historic era, the truss manufactory has become a giant industry. In 1894, one firm in Philadelphia manufactured and sold 450,000 trusses, and in the same year a Hernia Specialty Company was incorporated in New York with half a million dollars capital (5).

The scope of this paper will not allow a discussion of the merits or demerits of the truss.

The truss as a curative agent is practically limited to children under five years of age. The most carefully collected statistics show the following results: Under 12 months of age the cure of truss is 58 per cent.; from one year to five only 10 per cent., after that age practically nothing (6).

In acquired hernia the truss promptly applied, will cure 5 per cent. at fifteen years, and 1 per cent at thirty years of age.

The application of the truss in early childhood is practically safe, as strangulation is a rare accident.

Stern's analysis of the children's hospital in eight important European cities, shows that of 139,000 children treated, there was not a single operation for strangulated hernia (7).

A few years ago the worsted or "hank-truss" became the popular truss for treating children. But where alternate cases have been treated with the worsted and the spring truss, the latter has proved superior (8).

The largest field of use for the truss is as a palliative measure.

A patient calls for a physician, or more frequently a druggist, or truss vender; a truss is applied, possibly in a scientific, but probably in an unscientific manner, and the patient is sent abroad with a false idea of security. The large majority of strangulations occur in patients who are wearing a truss to prevent this accident. In a large number of cases the truss actually predisposes toward strangulation.

By applying a truss, we are sending a patient to face a future full of inconvenience, irritation, discomfort, pain (often actual agony), and danger. Danger much greater than that from the operation for radical cure.

In my own practice, I stopped applying trusses some years ago. When a patient consults me in regard to a hernia, I tell him it is an operative case, and explain the dangers of his condition. If he prefers a truss, I decline to assume the responsibility of applying one, and let him go to some one else.

The greatest danger arising from hernia is strangulation. The usual method of handling this accident, is its reduction by taxis or operation.

I sincerely believe that taxis is responsible for the majority of the deaths that follow strangulation. It causes death by injuries to the sac or its contents, but principally by the delay it causes, before operative

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I sincerely believe that taxis is responsible for the majority of the deaths that follow strangulation. It causes death by injuries to the sac or its contents, but principally by the delay it causes, before operative

measures are adopted. In the majority of cases probably both enter into the causation of the fatal issue. Nor should it be overlooked that the fluid of the hernial sac contains pyogenic organisms much more frequently than previous publications would indicate, and that taxis will materially increase the danger of their infection.

The mortality following the successful reduction of strangulated hernia by taxis is 7.8 per cent. (6).

My own opinion and practice is that taxis has no place in the surgery of strangulated hernia except as an adjuvant to an operation, or as an expedient for temporary relief until the patient can be prepared for an operation.

If taxis is decided upon, the patient is placed in a position that gravity will assist in the reduction. Then traction is made upon the tumor, while the canal is being manipulated. Traction lengthens out the mass that is blocking the canal, favoring the effects you produce by manipulation. Pushing upward on a strangulated hernia, simply carries it over the edge of the ring into the abdominal wall. Even gentle manipulation should not be continued over five minutes. Taxis should be attempted only within the first four hours after strangulation, even this time-limit may prove dangerously long in some cases; as even so serious a condition as gangrene of the sac, has occurred within this length of time after strangulation(10).

If taxis has been unsuccessfully tried before I see the patient, it is not repeated, but an immediate operation advised. Changes may have occurred in the contents of the sac, the result of, or hastened by, the mechanical violence of the previous taxis, that would make their return to the abdominal cavity extremely hazardous.

I have seen the surgeon's face light up with a halo of glory of hard work well done after a difficult reduc-

tion of a strangulated hernia and be correspondingly depressed by having to sign the death certificate next day.

I consider every case of strangulated hernia a surgical one, in which an immediate operation for its relief is indicated. There is no medical side to the treatment of strangulated hernia; medicine, by causing dangerous delay, eventually means death.

The surgical side of this question is none too bright. Bowlby (12) gives the mortality in the four largest hospitals in London, as not less than forty per cent., and ascribes it not to the operation, but to the time allowed to elapse between strangulation and operation. In cases operated within the first twelve hours the mortality is trifling. This trifling mortality from operations made within the first twelve hours rapidly grows to fifty and sixty per cent. by the fourth day.

A strangulated hernia is a surgical case, the treatment is an immediate operation.

The danger of mortality after strangulation increases with each tick of the clock.

Surgical lore describes more operations for hernia, than there are days in a year. Many of them as mysterious and intricate as a Japanese puzzle.

Until recently none of the operations stood the time-test, and few surgeons would have suggested any of these operations to a patient whose hernia was controlled with passable comfort and safety by a truss. About ten years ago the surgical treatment of hernia was revolutionized by the introduction of Halstead's operation for the radical cure of hernia, this was soon followed by Bassini's operation. But to the American surgeon is due the priority and honor of introducing the new principle which has already accomplished so much in alleviating human suffering.

The principle of these operations is the making of a

new canal and ring. For the detailed technique of these operations I refer you to any work on surgery. Both operations have been modified since their introduction.

Bassini's operation is the most successful and has had the greatest vogue, especially in operations on children. This operation is practically the formation of a new canal. It has been modified by the substitution of Kangaroo tendon for silk in the buried sutures, and a suture is introduced just above the cord, this, with the suture introduced through the same structures below the cord, prevents any separation of the tissues above or below the new internal ring, and restricts the cord to a narrow limit.

Halstead's operation has been modified by eliminating the excision of the veins of the cord—this was done to prevent resulting complications in the testicle. Orchitis occurred in one of my earlier operations, since then, I have curtailed the scrotum in each case where there was a redundancy of tissue. This prevents any dragging of the testicle. No patient has ever had an uneasy sensation in his testicle, since the plan was adopted. Nor do they have to wear a suspensory, which is otherwise necessary.

In suturing the canal, I would suggest beginning the sutures close down over the pubes, introducing them from within outward, this facilitates your work, and you can easily include in the sutures what structures you wish. If left till the last, these sutures are frequently placed with difficulty. The lowermost suture should embrace the conjoined tendon and include the transversalis fascia, also the edge of the tendon muscle, when practicable.

Bassini's operation has had its greatest success in the young subject. But, in the adult where the canal and rings have been widely stretched, I have an abiding

faith in the longer retaining power of the silver wire (Halstead's operation), particularly as experiments have shown that it takes about three months for the firm union of this tissue.

Either the silver wire or kangaroo tendon should be of a selected size for each case, as you would select different sized ligatures for varying sized arteries. Many failures can be attributed to the disproportionate size of the suture-material to the tissues upon which it is used. If the suture is too large, it interferes with nutrition and strangulates the tissues, cuts out, and also predisposes toward infection.

The silver wire is an inhibitor of pyogenic organisms and finally disappears.

The essentials for success in these operations is the careful coaptation of the greatest possible thickness of fascia, quietly maintained for a sufficient time for normal repair, without interference with nutrition, or the intervention of scar tissue, or wound infection. In proportion to the formation of scar tissue there is an increasing tendency to relapse.

To insure complete rest of the wound, and to prevent any sudden tension on the sutures, I apply a plaster of paris splint from the umbilicus down around the pelvis, and extending to the knee on the operative side. The minimum time-limit to keep these patients in bed is three weeks.

Tension is occasionally necessary in bringing together some of the deep structures, particularly the pillars of the external ring. This violates one of the most important principles of antiseptic surgery, and these cases should be especially guarded against infection.

These wounds should be absolutely dry before closure and as there are no dead spaces drainage is not necessary.

The present status of the operation is a mortality of less than one per cent. Doctors Bull and Coley have collected 3,000 operations made in the last decade with this light mortality. They consider pneumonia from the anæsthetic the greatest danger. Ninety-five per cent. is a conservative estimate of cures following a properly performed operation. These estimates presuppose a judicious selection of cases (13)

Indiscriminate operating by inexperienced operators should not be done. For success or mortality in these cases, which are watched by kindred sufferers, will give operative measures a serious set-back, wherever they occur.

To obtain the best results, requires a judicious selection of cases, preferably young subjects, for the likelihood of cure is proportionate to the youth of the patient. Surgical skill in operative technique, and experience in aseptic detail is necessary upon the part of the operator to insure success. I doubt if the first few herniotomies are ever satisfactory to the surgeon himself.

Our statistics of cures will remain unsatisfactory so long as the laity consider the operation as a dernier resort. We must educate them to the necessity of operating in early life, or, as soon as the hernia is acquired.

In my practice indications for operation are all otherwise healthy children over three years old, where the mechanical treatment has been faithfully tried for a year without success. All cases over this age, either congenital or acquired, when the operation is not contra-indicated by excessive stoutness, physical infirmities, or old age; or by the condition of the hernia itself.

Where the danger was due to age or physical infirmities, plus anæsthesia, many of these contra-indications have been removed by the use of local anæsthesia. This method has proved of inestimable value in strangulated

hernia, preventing much of the shock and mortality that followed general anæsthesia. I operated with local anæsthesia upon a case of strangulated umbilical hernia, with a resection of six feet of gangrenous intestine and an end to end anastomosis, without any pain, except when the gut was pulled on.

For a most interesting review of this subject, I refer you to an article with a report of forty-nine cases, by Doctor Cushing, in the Annals of Surgery, January, 1900.

In scanning this subject I have tried to develop the logical sequence, that the operative measures are safer than the mechanical treatment, that in the former there are over 95 per cent. of cures, and in the latter after early childhood practically none, and that the most conservative physician can conscientiously assure his patient of these facts.

Under the modern pressure toward a division of labor, and the tendency of all human efforts to focalize itself along special lines, surgery has made wonderful progress, and in no way is this better illustrated than in the treatment of hernia.

Before closing this paper, I wish to place the credit of this where it is due.

The fact that Bassini's operation is the popular one has led to the very general belief that the most valuable work in the literature and treatment of hernia was of European origin. The priority of each step that goes to make this operation is due to American surgeons.

The principle of the modern operation, that of making a new canal and ring, is due to Doctor W. S. Halstead, of Baltimore. The use of the animal suture (carbolized cat-gut) and suturing the canal in herniectomies, was successfully introduced in 1871 by Doctor H. O. Marcy,

of Boston. He also introduced the use of the kangaroo tendon for the same purpose.

The plastic operation, that of transplantation of the rectus muscle in cases where the conjoined tendon is obliterated, is due to Doctor J. C. Bloodgood, of Baltimore.

Probably the greatest credit is due to Doctors Wm. T. Bull and Wm. B. Coley for their modification of Bassini's operation, and particularly for popularizing this operation, and the best work and literature on this subject, a literature that I have drawn on frequently in the preparation of this paper, will always be associated with their names.

Gynecology and Abdominal Surgery, these kindred children of modern surgery (medicine), which as they have grown, have acquired such power to remove and alleviate human suffering, had their birth in Southern genius.

The foundation of modern scientific Gynecology was laid in this charming city; as the foundation of Abdominal Surgery was built in Kentucky, and as Marion Sims went abroad to teach the European surgeons that science of which he was the father and the master mind, so have his successors in this country sent to their homes with broadened view those distinguished European Gynecologists who came to this country to teach them.

The priority, originality, and the best work in Gynecology and Abdominal Surgery is that of American surgeons, and, please God, so it will remain.

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CHRONIC INTERSTITIAL NEPHRITIS—ÆTIOLOGY, SYMPTOMS, AND DIAGNOSIS.

By Edgar Allen Jones, M. D., Birmingham, Ala.

Member of the Medical Association of the State of Alabama.

By the term Chronic Interstitial Nephritis is meant a chronic inflammatory process, affecting the interstitial connective tissue of the kidney, and ultimately resulting in a contracted organ. There is extensive destruction of the tubular elements of the kidney, which is a result of the contraction of the newly formed connective tissue.

The cause of the disease is not always to be made out. Gout, and the gouty diathesis, probably hold the chief place as causative agents. Chronic infections, such as syphilis, tuberculosis, and malaria are very important etiologic factors. Chronic lead poisoning, and chronic alcoholism are frequently the excitants. Anxiety and business worry have been included in the list of the causes, but it seems more probable that these are simply associated with the disorders of nutrition which are so frequently found in the class of patients who work long hours under great mental and physical strain. Disorders of elimination are common among these persons. Heredity is of undoubted ætiologic import—many cases being cited in which whole families, even for three generations, have had the disease. It is essentially a disease of middle life—few cases ever occurring under thirty years of age. The association of arterio-sclerosis

and chronic interstitial nephritis is of great interest. Whether either one is the exciting cause of the other, or not, has never been satisfactorily determined. It is probably true that the exciting cause may be the same for both diseases.

Whatever the ætiology, the pathology of the disease is that of any productive inflammation, the long-continued effect of a slight irritant causing hyperplasia of the connective tissue of the organs. Both kidneys are usually affected alike. The morbid changes are, briefly: Kidneys greatly contracted or shrunken, though occasionally the decrease in size is inconsiderable; surface of kidney rough, irregularly lobulated, and the capsule firmly adherent; small cysts are often observed on the surface (retention cysts). On section, the organ is quite firm; both the cortex and the medulla are very narrow; the walls of the blood-vessels are visibly thickened. Microscopically there is great hyperplasia of the connective tissue around the Malpighian bodies, convoluted, and straight tubules, and walls of the blood vessels. The amount of this overgrowth of fibrous tissue varies with the age of the lesion, from a moderate thickening of Bowman's capsule, and the inter-tubular tissue, to those cases in which almost the whole organ is converted into scar tissue. The epithelium degenerates, the cells become loosened from the basement membrane, and the tubules may be filled with hyaline, or finely granular, or even fatty, casts, or, they may appear dilated from the loss of their epithelium. The changes in the parenchyma are purely passive, and are due to the pressure—no inflammatory process preceding the degeneration. The glomeruli seemingly enjoy greater resisting power than the tubular epithelium, and in some cases sections show totally destroyed tubules, with comparatively unaffected glomeruli and newly formed connective tissue.

Remembering how insidious is this disease, it is with great interest that we notice the symptoms. The beginning of the disease is not characterized by any distinctive symptoms, and, even later, there may be no well-marked ones, until uræmia points to the beginning of the end. Frequently, the physician, on account of some vague symptom, will have the urine examined, and the diagnosis will then follow. Slight swelling of the ankles, or a hard, bounding, pulse, with accentuated aortic second sound of the heart and hypertrophy of the left ventricle, may be the cause of the examination. The following symptoms or conditions, when found in any case, but especially in persons above forty years old, demand a careful examination of the urine for evidence of chronic interstitial nephritis: Nocturnal urination; unaccountable weakness; symptoms referable to the gastro-intestinal tract, such as, dyspepsia, causeless diarrhœa, violent vomiting, and repeated "bilious" attacks; dyspnœa, asthmatic attacks, and chronic bronchitis; repeated headaches—especially if post-cervical; persistent, unexplained, neuralgias, vertigo, and insomnia; bounding cardiac action, or visible pulsation in various parts of the body; severe hemorrhages from the nose or stomach; dimness of vision, sudden blindness, or tinnitus aurium.

The changes in the urine are quite characteristic: large quantity (4-6 pints, 2000-3000 c. c. in 24 hours) of pale urine of low specific gravity (1.005-1.010), containing a moderate number of hyaline, and a few finely granular casts; albumen may or may not be present—the amount is never large until near the end of the disease; the amount of solids excreted is greatly diminished, especially urea.

The diagnosis is to be made from a group of symptoms, and not from the urine alone, for, casts may be,

and albumen frequently is, absent. The main points are: Polyuria, with continued low specific gravity; reduction in daily excretion of urea; hypertrophy of the left ventricle (without valvular disease), and increased tension of the pulse; and, nervous symptoms, as, occipital headache, vertigo, dyspnœa, and insomnia.

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DISCUSSION.

Discussing the paper of Dr. Jones, Dr. J. P. Furniss, of Selma, Ala., said,

That during his student days, especially while attending the clinics of Dr. Austin Flint, Sr. at the Charity Hospital, New Orleans, he never recollected seeing a case of chronic nephritis which was not due to alcoholism; that modern text-books now state that no experimenter had been able to produce nephritis in animals by the administration of alcohol; that alcoholics were not notoriously careless and improvident; that most of their attacks could be attributed to exposure while on a debauch; that some years ago during the months of April and May he had eight cases of chronic nephritis under treatment at one time; that in not one of the cases could the disease be attributed to the abuse of alcohol, that all of them had begun as attacks of acute nephritis; that he believed that the variable weather during February and March was particularly favorable to the production of the disease; and that the resident physicians of Waukesha, especially Dr. Margaret Caldwell, who treated great numbers of cases, believed that the majority of their patients could trace their disease either to exposure or to the degenerative changes of life.

THE HISTORY OF AN OUTBREAK OF SMALL-POX IN ALABAMA CITY.

By Erastus T. Camp, M. D., Gadsden, Ala.

Member of the Medical Association of the State of Alabama.

Alabama city is a cotton manufacturing town, with a population of 3,000. The inhabitants are employed almost exclusively in the mill, store, and the different offices of the company,—hence they mix and mingle together freely.

The town is located mid-way between Gadsden and Attalla. The two latter are five miles apart. Gadsden has a population of 6,000, and Attalla 2,000. They are connected by an electric car line and three railroads, all of which pass through Alabama City.

On December 12, 1899, I was notified of some cases in Alabama City that were suspected of being small-pox. On investigation, I found eight cases of smallpox; some of them typical. They were just entering the pustular stage.

After thorough investigation, I was unable to trace the origin of the infection, but think it most probable that it came through cotton, used in the mill, that was contaminated with the contagion of smallpox, either in picking, ginning, or handling in some other way. This theory is supported by the fact that the mill had been using cotton shipped from localities known to have been infected with small-pox; and, also, by the fact that most of the persons attacked worked in the same depart-

ment, at the time the disease developed. Another theory is, that some machinery had been shipped from some of the eastern cities where small-pox probably existed. A third theory is, that some mild case was brought into the place by some transient person and was never recognized. I am inclined to accept the first theory offered.

The eight cases were in seven families residing in different portions of the town. These seven houses would average eight persons to the family, making a direct exposure of fifty-six persons, plus the exposures in the mill and elsewhere, before the cases took to their beds. There was no restraint until I saw them on the sixth or eighth day of the disease. After the first group of cases there were no others for some six or eight days.

By the expiration of eight or ten days some twenty or twenty-five cases had developed. After that time cases continued to develop at a very rapid rate until the spread of the disease reached its zenith, some five or six weeks after the first group of cases.

At the time of the outbreak, there was no hospital or vacant house available, and we were forced to let the cases remain in the houses in which they occurred, until a hospital could be constructed, which was some ten or fifteen days later.

Guards were immediately placed at every infected house, under the supervision of myself, as County Health Officer. None of the inmates were allowed to leave the house, and no one on the outside was allowed to enter, and the patients were isolated from the remainder of the household as much as possible.

As soon as hospital accommodations were provided, all cases that had occurred up to that time were transferred to the hospital. The remaining members of the infected families were given thorough baths, first with

soap and water, then they were sponged off with a 1 to 2,000 bi-chloride mercury solution. They were dressed in clothing that had not been exposed to the contagion of smallpox, or, if exposed, had been fumigated with Formaldehyde gas. The persons so disinfected were not allowed to return to the infected house until the latter had been fumigated. The fire-places and other openings in the rooms were sealed up by pasting paper over them, and the crevices around the doors and windows were chinked with cotton, so as to make the rooms as near airtight as possible. A part of a house was fumigated at a time, about one-half, and on the following day the remainder. After the Formaldehyde gas was thrown into a room with a generator, the room was kept closed for at least twelve hours, then it was opened up and aired for an hour or two, after which, it was re-occupied by the family.

The cases that occurred after the hospital was built were immediately transferred to the hospital, the remaining members of the family and the houses being treated as described above.

Vaccine virus was ordered by wire, and was on hand by the third day after the discovery of the disease. The masses of the people were very much opposed to vaccination. The city council passed a compulsory vaccination ordinance, but owing to violent opposition on the part of the people, it was deemed expedient not to enforce it. The ordinance was then so modified as to apply only to persons who had been directly exposed. Persuasive measures were instituted, but, owing to the great opposition, many were not vaccinated.

We labored under another great disadvantage; the first lot of vaccine virus proved to be inert, or almost so, although furnished by one of the most popular manufacturers in the country. So, other virus had to be ordered

from a different house. To the inertness of the first virus was due, I am satisfied, many cases that otherwise would not have occurred.

QUARANTINE AND OTHER REGULATIONS TO PREVENT THE SPREAD OF THE DISEASE.

On the day I discovered the disease, I requested the committee of public health for the county to meet; which they did on the following day. After a thorough investigation of the situation and the facts, they made a recommendation to the Judge of Probate and Court of County Commissioners, and the municipal authorities of the towns of Gadsden and Attalla, advising that a quarantine be established against Alabama City; said quarantine to be conducted under such rules and regulations as might be prescribed by the committee of public health, and to be enforced by the County Health Officer.

After three or four days of indecision on the part of the county and municipal authorities of Gadsden and Attalla, it was decided to establish quarantine against Alabama City at the expense of the county. This quarantine consisted in placing a cordon around Alabama City, guards being stationed at all the avenues of travel leading out of Alabama City, including the electric car line and the railroads. Under these regulations, travel through Alabama City was not interdicted, but was allowed to proceed under such restrictions as guaranteed that persons passing through would not come in contact with infected persons or places.

All persons within the quarantined territory wishing to pass out were required to procure certificates from some one of the resident physicians, based upon an oath that, to the best of their knowledge, they had not been exposed to the contagion of smallpox within the past fifteen days. These certificates, when first issued, were

good for five days from date of issue, but, later on, the time of their validity was, by order of the committee of public health, reduced to one day.

Guards were placed around all infected houses to prevent any except authorized persons from entering them. No household goods or wearing apparel were allowed to be removed from the quarantined limits, without first being disinfected by the County Health Officer, and bearing a certificate to that effect.

This quarantine was kept up for two weeks, when the Probate Judge, without conferring with the committee of public health, removed it. At the time the quarantine was removed the disease had increased until there were some fifty or sixty cases, and new cases were occurring daily.

The inhabitants of Alabama City were indignant over the idea of being vaccinated, and were opposed to being carried to the small-pox hospital. The whole town was in an uproar. A great unmber were frightened, for fear the disease would become epidemic, and it looked at this time as though there would be a stampede. At this crisis, the municipal authorities of Gadsden and Attalla, upon the recommendation of the committee of public health, established quarantines against Alabama City for the protection of the citizens of their respective towns, which remained in force until the hospitals had been finished and all patients had been removed thereto, and until all infected houses and their contents had been disinfected; in fact, until the disease was brought thoroughly under control. Just in proportion to the progress made in perfecting and putting into operation the measures already mentioned, did the spread of the disease begin to give way like the flames of a building on fire under the play of a deluge of water.

On the 15th of March the last case was discharged, and the outbreak was ended.

During the course of the disease, 140 cases developed (all white), and in thirty-seven different houses. Some of the houses, at the beginning, had as many as eight or ten cases in them, manv of them only one, especially toward the last of the outbreak. In no instance was the contagion traceable to an infected house after it had been fumigated. Nine deaths occurred.

Only two cases developed in Gadsden, the contagion of which could be traced to Alabama City, and none in Attalla; notwithstanding the close proximity of these two places to Alabama City. Communication was allowed all the time, under the restrictions above mentioned. The two cases that occurred in Gadsden were contracted prior to the establishment of the quarantine.

No cases developed in the county that were traceable to Alabama City, but a few cases developed in adjoining counties that were so traceable; one of them prior to the establishment of the quarantine, and the others after the raising of the quarantine by the Probate Judge, after which time, there was no restraint to prevent persons from going into the country, provided, they did not pass through Gadsden or Attalla.

CONSTRUCTION OF HOSPITALS.

The first hospital that was constructed was built on a cheap plan, but was comfortable. The main part of the building was 20x40 feet, with two open fire-places, and with a veranda in front. In the rear of the body of the building, and joining it, were two 16x16 feet rooms, divided by a six-foot hall, the latter connecting with the main building by a door. The hall extended to a porch in the rear of the building, said porch extending to the cooking and dining departments. The capacity was twenty or twenty-five beds. At the time the first hospital was finished more cases had developed than it could accommodate. To enlarge the accommodations, a

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school house near by was converted into a hospital, by adding a cooking department to it. The capacity of this building was twenty beds.

By this time it became evident that still more hospital room would be needed to control the disease, and a second one was built with a capacity of sixty beds. It was built in a hollow square, with verandas extending all around on the inner side of the square. This included the cooking, dining, and nurse's departments. The building was weather-boarded and lined with builder's paper, warmed by heaters in each department, and is a very comfortable and well-arranged building. A closely-built bath house, with heater, and an air-tight fumigating room were built some thirty yards from the last described hospital, also, a room which the doctors used for changing their clothing and for such ablutions as were necessary.

All the hospitals were furnished with new cots, mattresses, and bedding. Everything was kept clean and neat. Immune nurses were placed in charge of the patients.

MEDICAL TREATMENT AND MANAGEMENT OF THE PATIENTS.

The prodromic symptoms were treated as the necessity of the different cases demanded. Each paeient was anointed once or twice daily with borated vaseline, one dram of boric acid to one ounce of vaseline. This was kept up daily until desquamation began to take place, when 5% carbolized vaseline was used. At this stage a bath of soap and water was given daily, or every second day, after which the patient was sponged off with a 1 to 2,000 bi-chloride mercury solution, and afterwards annointed with carbolized vaseline. The clothing was changed every few days. Soiled clothing, sheets, and

pillow-cases were boiled and washed, as occasion demanded.

The anointing, I am convinced, lessened the contagiousness of the disease, and hastened from five to ten days the recovery of patients. It helps to prevent pitting, and renders the patient more comfortable, by allaying itching and reducing the temperature in the febrile stage.

The sputa and other excreta were removed from the room at frequent intervals.

To the above measures might be added with profit, fumigation of the rooms with Formaldehyde gas to the extent of tolerance of the patients. This could be done several times a day, with a small generator that could be placed in the room. This would overcome any unpleasant odor and tend to destroy the germs of the disease. Also, each patient should have nose irrigated and throat gargled with a normal salt solution, from two to three times a day. These measures would render the patient more comfortable, and tend to shorten the course, and lessen the contagion, of the disease.

During the course of the outbreak, we had several cases of relapses or recurrent attacks. No writer, that I have consulted, refers to similar cases. Some writers state that about 1% will have a second attack. This I infer has reference to cases that have the second attack some considerable length of time after the first.

The first case of this kind that came under my observation was in the person of a young lady in Alabama City, who was taken ill with all the prodromic symptoms of smallpox. She had been vaccinated, and the virus was just beginning to impress her system. My first visit was on the third day of her illness. She had a slight rash on her face, neck, and chest. On the following morning, the rash had extended over the entire body, and papules were beginning to appear on the parts where

the rash first made its appearance. At my second visit, the two attending physicians and myself decided that the case was one of well-marked smallpox. She was sent to the hospital against the protest of her mother. In a few days after she entered the hospital, the rash disappeared and some half dozen well marked bumps appeared. They were of the large flat variety. They ran a regular course, and about the eighteenth or twentieth day it was considered safe to discharge her; consequently she was given a warm bath and sent home. On the following morning I was called to see her, and found her with an elevation of temperature, considerable rash, and quite a number of well-marked papules. She was sent back to the hospital and developed a well-marked, but mild case of smallpox, which ran a regular course in three weeks. When she first entered the hospital she occupied a room in which there were some twelve or fifteen cases, some of which were very severe. The family became very indignant over the matter, and threatened to sue for damages. Several other similar cases occurred in Alabama City.

A well-marked case of the same kind was a Mr. H. and family (white). Mr. H. resided in Gadsden and had contracted the disease in Alabama City. I first saw him on the second or third day of his illness, when he reported that he was taken with a chill, and all the other prodromic symptoms of small-pox. I found him well-broken out with considerable rash and some papules. The case was diagnosed smallpox. Mr. H. had not been vaccinated. His wife and children were vaccinated on my first visit, and all were placed under guard. At that time Gadsden had no small-pox hospital, and Mr. H. remained at home with his family some twelve or fifteen days, when he and family were transferred to a hospital which had been provided. A few days previous to this
back to the hospital and developed a well marked, but

transfer, the wife and one of the children developed the same disease Mr. H. had; neither of whom had been otherwise exposed. After they had been in the hospital ten days the other child developed the same disease.

There were no other cases of small-pox in the hospital, except a Mr. B., who had a very mild case, and who was in the desquamative stage, when admitted. Soon after Mr. H. and family were placed in the hospital, a negro with a severe case of small-pox was admitted to a different hospital building, some 100 yards distant from the one Mr. H. and family were occupying. Mr. H. stated that he had no association with the negro except that sometimes they met at the spring, and that they used the same axe for chopping wood, during their convelescence. After about the fourth week of Mr. H's attack, he was pronounced well, and ordered to take his bath preparatory to being discharged. Owing to some delay in carrying out the orders, Mr. H. did not leave the hospital, as contemplated, and on the following morning he broke out with the second attack of smallpox, which ran about the same course as the first, except that the second case was a little better marked than the first.

In about two weeks after Mr. H's second attack, his wife and child, who first had the disease, developed second attacks of small-pox, which ran about the same course as the first. Two weeks later the other child also developed a well-marked second case. The last three cases, as that of Mr. H., had recovered from the first attack before the second came on.

I am satisfied, in my own mind, that all these persons had small-pox in both attacks. The only theory that suggests itself to me by which to explain the second attack, is that during the first attack the susceptibility of the system to the infection was not entirely exhausted, that is, all the elements of the system upon which the infec-

tion of small-pox feeds, were not exhausted or impressed, consequently, there was material left for a second attack. It may be stated that during the first attacks of these persons they were closely confined in ill-ventilated rooms, therefore, they were exposed to the infection in a very concentrated form.

I find that the contagiousness of smallpox is much greater during the febrile stage than most writers claim. This is especially true when exposed persons remain in a close room for several hours with cases of the disease in that stage.

To sleep on the same bed with a patient in the febrile stage is almost certain to result in producing the disease in the person so exposed, unless rendered immune either by vaccination or a previous attack.

TUBERCULAR JOINTS IN COUNTRY PRACTICE.

By Samuel Wallace Welch, M. D., Alpine, Ala.

Counsellor-Elect of the Medical Association of Alabama.

There is perhaps no ailment to which human flesh is heir that taxes the time, patience, and ingenuity of the country doctor more than a tubercular joint.

The onset is usually so insiduous, and the symptoms so obscure—coupled with the comparative rareness of the trouble—as to quite frequently escape attention, until there is serious involvement of the tissues.

I will not tax your patience with the many theories as to the etiology of the affection. It seems quite natural to conclude that the tubercle bacillus circulating freely in all healthy blood finds in the irritated tissues of a contused joint a suitable nidus for development and propagation. There is always a history of injury, more or less severe, to the joint, with a strumous diathesis. As a rule, slight pain on motion exists for a considerable period, sometimes a month or more, before active symptoms arise. When medical advice is sought there is usually much pain on motion and the joint is found swollen, and very sensitive in the region of the bony prominences. The trouble simulates, very closely, acute articular rheumatism. The temperature will be found to range from 99 to 104, and to be persistent and intractable, accompanied by very exhausting night-sweats, emaciation, and cachectic appearance. The principal danger to life from an infected joint is the possible diffusion to the general system, producing acute miliary

tuberculosis. This is one of its surest phases when due care is not taken to evacuate purulent effusion, in case it supervenes. It is remarkable, however, to note the degree of resistance which the human economy often develops to this wasting disease, and still more remarkable to note the amount of abuse this same economy will stand at the hands of a country doctor. I have had a very lively sympathy for the unfortunate wretches who have sought counsel at a certain office "Beside the Bonnie Brier Brush," near Alpine, from whence these thoughts have come to you. More than once have I had occasion to "thank God and take courage" for the strong constitutions with which dame nature has endowed my clientele.

Case, 1. A girl, age 14 years, had been treated for five weeks for typhoid fever. An abscess had been evacuated over the surgical neck of the humerus. There was severe pain of a paroxysmal character in the hip joint. Patient was confined to her back, with the knees flexed. Careful examination upon a straight table established the diagnosis of tubercular hip. She was placed on her back upon a hard mattress; strips of adhesive plaster were applied to the inner and outer surfaces of the entire limb, care being taken to adjust them to the condyles of the femur and to the ankle-joint; a stout cord was tied to the adhesive strips ,and by the aid of a pair of curtain rollers, fastened to the upper and lower side of the foot-board, first-rate extension was obtained. Patient was taken off the prescription of turpentine emulsion, phenacetine and quinine, and put upon strychnia, cod-liver oil, and liquid diet. With the exception of one severe paroxysm— about twenty-four hours after the dressing was applied—patient suffered but little more pain. The soreness and swelling subsided; the appetite improved; and in about four weeks the patient was up

and about on crutches, with a shortening of 2½inches in the limb. She is now well, four years later.

Case 2. Male, 15 years old, robust health, was thrown from a horse and suffered a slight sprain of the knee-joint, which confined him to the house for a few days. Slight pain on motion persisted for some months, when, the inner condyle of the femur began to enlarge rapidly, the pain increasing in severity, and growing worse at night. No febrile reaction was found at any visit. There were no night-sweats, nor any other symptoms worthy of note, except the pain and the rapidly increasing deformity of the limb. A plaster-cast was applied, being renewed at intervals of two weeks, and was kept up for a period of six weeks. Patient was allowed to go about his ordinary avocation. The pain subsided, but the deformity still persisted, and gradually grew worse for some months. No medicine was given, the patient gradually gained in weight, and, barring a halting gait, is a vigorous and robust subject.

Case 3. Male, age 23, a carpenter, had been much upon his knees, ceiling houses. When first seen had been suffering for about a month with slight pain in knee-joint on motion, and on retiring at night. There was no swelling; temperature 99°. Prescribed salicylate of soda. Patient rode horse-back ten days later. When called to see him next day, found knee badly swollen, acutely sensitive over condyles of femur, marked fluctuation, temperature 103°, facies presented appearance of long illness. Patient was put to bed and a hypodermic of morphia administered. Limb was immobilized with sand bags, a lotion of chloroform, alcohol, and tincture of cantharides was applied every four hours and limb was painted with tincture of iodine twice daily. One-thirtieth of a grain of strychnine three times a day was prescribed, with liquid diet. About the same condi-

tions obtained for eight days, when very exhausting sweats supervened. Opening the joint was debated, but the writer's previous observation of open knee-joints had been sufficient to satisfy his curiosity as to their contents. It was finally decided that the patient could handle a closed joint better than his doctor could an open one, so, an expectant plan of treatment was adopted. In a few days, the swelling began to subside, the pain grew less acute, fluctuation was not so marked, and the appetite improved. On the twentieth day a plaster-caste was applied and the patient was allowed to sit up. He began using crutches a week later, and is now (three months afterward) about well, with a slight stiffness of the joint, which it is hoped will disappear with use.

It is worthy of note that the two cases reported, and two others with tubercular knees treated, one of which died of miliary consumption, all developed the trouble in the condyles of the femur, and afterward the tibia and fibula were attacked, instead of vice versa, as recorded by authorities.

Thanking you, gentlemen, for your kind attention to this rehearsal of difficulties, I will close by wishing that you may never have a patient with a tubercular joint, but, should you be so unfortunate, I earnestly hope that you will have a better doctor close at hand with whom to consult.

PUERPERAL INFECTION, ITS CAUSES AND PREVENTION.

By Seale Harris, M. D. Union Springs, Ala.
Member of the Medical Association of the State of Alabama.

The term "Puerperal Infection" seems to me to be the one best adapted to encompass the many diseased conditions, caused by micro-organisms, in the puerperal woman, where the focus of infection lies within the genital tract.

The term "puerperal fever," which is still in use by some, should in my opinion be discarded from medical literature; it is unscientific, expressing only a symptom of the disease, and conveys no idea of the real condition with which the physician has to deal.

"Puerperal septicæmia" is also an inadequate expression, as it is only one form of puerperal infection.

The puerperal woman presents an organism in a lowered state of vitality, which predisposes her to infection of all kinds. The placental site, with its open veins, has been compared to the stump left from an amputation, and is as easily infected. During and after labor there are found many wounds of the genital tract, varying in degree from a minute abrasion of the mucous membrane to an extensive tear of the perineum or cervix uteri, which furnish the "locus minoris resistentiæ" and become the infection-atria for the various pathogenic germs sometimes found in the vagina or cervix uteri. Thus, we have a true wound-infection, which may be local or systemic, and varying in

degree from a simple vaginitis to a rapidly fatal septicæmia.

In puerperal infection we meet the same pathogenic micro-organisms that we do in other infected wounds, and when we realize that it is essentially a surgical condition, then will we arrive at the rational methods of its prevention and cure. When I say that puerperal infection is a surgical condition I do not mean that in its treatment it is always necessary to resort to the knife, because its use is rarely indicated, but that in the treatment of puerperal infection, we should use the same mthods of antisepsis and drainage that we do in other wound-infections, modified only by the character of the tissues affected.

The pyogenic bacteria are the ones with which we have most to deal in puerperal infection; the streptococci producing the most serious, or systemic forms; and the staphylococci tending to remain in local inflammatory processes. The streptococcus of erysipelas is probably identical with the streptococcus pyogenes; it is certain that its morphological character greatly resembles that of the streptococcus pyogenes, and some of the most virulent cases of puerperal infection, with peritonitis and death, have been traced to erysipelas infection.

The bacillus ærogenes capsulatus—that peculiar air-forming germ, found also in emphysematous gangrene—seems at times to be the infective agent in some of the most rapidly fatal forms of septicæmia.

The Klebs-Loefler bacillus may also infect the genitals of the parturient woman, producing at the seat of infection the characteristic diphtheritic membrane, with the same severe constitutional disturbances as in pharyngeal diphtheria.

Scarlet fever may attack the lying-in-woman, but it

remains scarlet fever, the same as in any other person, and the infection atrium is hardly the genital tract, so, it will not be further discussed in this paper. The same is true of typhoid fever and other contagious and infectious diseases.

The germs of putrefaction play a more important part in puerperal infection that in other wound-infections, for the reasons that from the anatomical and physiological character of the genital canal air is excluded, and owing also to the relatively large amount of dead organic matter found in the lochial discharges, such as, blood clots, disintegrating shreds of the decidua, and the effete products from the retrograde processes incident to uterine involution, thus furnishing the most favorable conditions for the lodgment and propagation of the saprophytic bacteria.

The gonococcus, apparently, has little to do with the puerperium, and some authorities disregard its part in puerperal infection; but, in my opinion, many cases of pyo-salpinx begin a few days after labor, when the only symptoms are a little acute pain in one iliac region, with perhaps, a degree or two of fever. However slight these symptoms, the danger is that a gonorrhœal salpingitis has been set up, which dooms the innocent victim to the mercy of the surgeon's knife, or to a lifetime of misery and suffering.

The healthy vagina may contain the various germs of sepsis and putrefaction, but it is also true that the vaginal secretions are endowed with germicidal powers, which in a short time will destroy or render inert any of the pathogenic bacteria.

According to Doderlin, so long as the vaginal secretions retain their normal acid reaction, and the normal vaginal bacteria—the principal of which is the bacillus named for Doderlin, who first isolated it—are present,

all pathogenic bacteria which may be introduced into the vagina are soon rendered innocuous, but as soon as the secretions become alkaline, as, when the lochial flow is established, they lose their antiseptic powers; and since it is well known that the pathogenic bacteria thrive best in an alkaline medium, Doderlin advises post partum douches of lactic acid solution in order to render the vaginal secretions acid. However, I do not think that Doderlin's views are sufficiently established as to be followed practically, but rather agree with Kronig, who maintains that whether the vaginal secretions are normal or not, they constitute a more efficient antiseptic than any which could be given in the form of a douche. I would not be placed on record as opposing the antiseptic or cleansing douche after infection has actually taken place, but, until then, I believe that nature has already provided the best antiseptic which can be placed in the vagina.

As to the possibility of auto-infection I will quote from Kelly, who says: "The number and virulence of the organisms (in the vagina) are variable. It seems probable, therefore, that pathogenic bacteria are sometimes present in the genital tract, and under these conditions it requires only a transitory weakening of the normal safe-guards to bring about an infection. It does not seem impossible, therefore, that auto-infection may take place; but when infection occurs it is most likely that the bacteria are introduced by manipulations of some kind shortly before the symptoms appear; for, after all, the pathogenic bacteria probably do not lie dormant in the genital tract for any great length of time."

Contact-infection is what we have to guard against, and the accoucher's hand is the great source of infection to the "puerpera." His hand may be sterile, yet, in the

examination, he may carry pathogenic bacteria from the vulva to the cervix uteri. Coitus a few hours before labor may be the method of introduction of the infected agent into the genital tract.

Garrigues, Jewitt, Playfair, and others still cling to Lister's theory of air infection, and in their most recent works speak of infection having taken place from atmospheric conditions; but since Schimmelbusch and others have proved to the satisfaction of all surgeons that the air contains no bacteria except those held on particles of dust, it seems that in the prevention of puerperal infection we may disregard the condition of the atmosphere, except in so far as to use measures to prevent the dust of a lying-in-room from being put in motion.

In order to give instances proving the transmission of infection to the puerpera, I do not have to go back to 1843, when Dr. Rutter, of Philadelphia, had forty-three cases of puerperal infection, which were traced to a purulent ozena, with which he was afflicted; nor to 1847 when Semmelweis established as a fact that the students, who also attended the dissecting hall, were the cause of the great mortality in the lying-in-hospitals of Vienna; but, in my own limited experience, I have observed several instances in which I thought I could trace the source of infection to the carelessness or ignorance of physicians and midwives.

A physician who resided in Bullock county told me that he once had in his practice an epidemic of what he termed "child-bed fever," and lost five patients in a very short time, among them his own wife. He could never account for it, but somehow had a vague idea that he was in some way responsible for these cases, and for that reason gave up his obstetrical practice for sometime, and there were no further cases of puerperal infection

in that community. In the light of our present knowledge, it does not seem unreasonable to believe that this physician carried the infection to his patients.

Three years ago I was called four miles into the country to see a case of severe septic endometritis in a primipara, white, who had been attended by a midwife, and it was only by prompt and thorough treatment that her life was saved. In less than two weeks afterward, a physician reported to me, as health officer, the death from general puerperal peritonitis of a negro woman who ten days before had been attended by the same midwife. A week or two later the midwife reported another death from "child-bed fever." I instructed her not to attend any more cases of labor for several months, and under no circumstances to wear the clothes which she had worn while attending the cases. I also instructed her how to cleanse her hands and arms and told her never again to put her finger into a woman's vagina. So far as I know she obeyed my instruction. I did not hear from her in a year or two and had no more reports of "child-bed fever" from that locality. Does it not seem probable that this midwife was the medium of infection in these cases?

While a medical student at home on vacation, I was kindly invited by a physician to attend with him a labor in a young and strong negro girl. I did so, and as the evening was cool wore a "foot-ball sweater," which I had occasionally worn in the dissecting hall. I was permitted to make frequent examinations to determine the progress of labor, or rather to obtain some experience. The physician required me to bathe my hands in mercuric chloride solution before making the examinations. The labor was normal, except there was a laceration of the perineum extending nearly to the sphincter muscle, which was not repaired. The girl died ten days later

from septicæmia. I regret that it is true, but I shall always feel that our neglect in failing to repair that lacerated perinuem, and my ignorance in wearing that infected sweater, were responsible for that girl's death.

Another case that came under my observation, where I thought I could trace the origin of infection, was one of septic endo-metritis. I was called to the labor an hour before the birth of twins and without having been notified that I was expected to attend the case. There was no time to change the sheets, which had been on the bed for two or three days, and when I reached the case I found one of the good ladies fanning the sufferer with the top sheet, thereby stirring up all the dust that had accumulated on the sheets after two or three days' use. I had the woman's vulva and the surrounding parts bathed with soap and water and a 1-1000 solution of mercuric chloride. I was also careful in disinfecting my hands and made only two examination, and then did not introduce my fingers within the cervical canal. Three days later a telegram informed me that the lady had had a chill and that the temperature was 104° F. She came near losing her life from a putrid septic endometritis. For a time, I was puzzled as to the origin of the infection, but two or three months later her husband applied to me for treatment for nasal catarrh, and I found that he had had a persistent purulent discharge from his nose for several months. He had slept on the sheets for two or three nights previous to his wife's confinement, and to that I attribute the source of her infection.

In merely mentioning the different forms of puerperal infection I shall adopt the classification of Garrigues, as used in his splendid monograph on the subject, in the "American Text Book of Obstetrics." This nomenclature will suggest the pathology, symptoms, as well as, the appropriate treatment for each condition.

Vulvitis and vaginitis may be simple, purulent, or diphtheritic.

Endo-metritis is the most frequent variety of puerperal infection, and it may be either septic or putrescent in character. The inflammatory process may simply affect the muccous membrane, or it may invade the muscular coat of the uterus, thus giving a metritis. When the infection becomes systemic, and travels through the lymphatics, it is called a general lymphatic endo-metritis; and when it is carried through the veins, it is called a general thrombo-phlebitic endo-metritis. Always in metritis, and often in endo-metritis, the peritoneum is also involved, and we have a pelvic peritonitis. Frequently we have some or all of these conditions so blended that it is impossible to clinically differentiate them. Cellulitis may follow, which may end in resolution, or, as a pelvic abscess.

Salpingitis and ovaritis are rare complications of the puerperium.

Lymphangitis is one of the most frequent forms, and often ends in a peritonitis or general infection. The lymphatics of the vulva and lower one-fourth of vagina lead to the superficial inguinal glands, from which others go to the deep inguinal glands. Thus, a neglected laceration of the perineum may be the starting point of a general peritonitis. The lymphatics of the cervix go to the internal iliac and sacral glands, and an infection beginning in a lcerated cervix very often leads to a pelvic peritonitis. The uterus is the net-work of lymph-spaces and channels, so that a uterine lymphangitis practically means an inflammation of the surrounding tissues as well, and frequently a systemic infection.

Phlebitis, though not as frequent as lymphangitis, is perhaps the most dangerous form of infection. From an infected thrombus, which gets into the blood current,

thereby forming an embolus, the infection may be carried to any part o fthe body. Thus, following, and perhaps complicating, a phlebitis, we may have infarction of the lung, septic pneumonia, endo-carditis, hepatitis, nephritis, or inflammation of any part of the body to which metastasis can take place. Phlegmasia-alba-dolens begins from a phlebitis or cellulitis.

Septicæmia and pyæmia are generally sequelæ of phlebitis and lymphangitis, though there is one form of septicæmia which seems almost to be primary, and is so virulent that death often occurs before any pathological changes can take place.

Regarding the mortality from puerperal infection I can do no better than quote a paragraph from a very strong article by Jewitt:

"While in pre-antiseptic times the puerperal mortality was many times greater in public institutions than in private practice, to-day the pauper delivered in a hospital is exposed to less risks than the well-to-do classes who are confined in their own homes. Insurance reports show that of all deaths in women between the ages of nineteen and twenty-nine more than eighteen per cent. and between the ages of twenty-nine and thirty-nine more than thirteen per cent. are due to puerperal causes. From sixty-five to seventy-five per cent. of puerperal deaths are attributable to sepsis. It is fair to assume that these calculations have to do almost wholly with a class delivered outside of hospitals. This indicates a mortality that is truly appalling, especially when one reflects that it falls upon women in the prime of life and usefulness, and is the result of a preventable disease. Yet, the disastrous effects are not represented by the mortality alone. Thousands of invalid mothers owe their impaired health to the milder grades of sepsis in child-bed. No stronger

evidence could be offered than is afforded by the foregoing facts of the need for improvement in the obstetric methods of the general practitioner."

Leopold reports over three thousand consecutive labors without a death from sepsis, and a number of American lying-in-hospitals show records almost as clean. What of our own records, gentlemen? Can any of us, who attend as many as a dozen labors a year, go for five or ten years without a death from sepsis?

The prevention of puerperal infection may be summed up in the two words, which seem hardest for the general practitioner to master, i. e.: asepsis and antisepsis.

The general practitioner, and this paper is addressed entirely to that class of physicians, should, as well as the surgeon, cultivate the aseptic "habit;" or, as Kelly terms it, the "aseptic conscience." He, of all men, should, at all times, be scrupulously neat and clean. He should keep those great harbingers of infection, the finger nails, trimmed close, and the spaces beneath them free from dirt. After contact with any infected wound or other infection, he should carefully sterilize his hands, paying especial attention to the nails and the spaces underneath them, because he knows not at what moment he may be called to attend a woman in confinement, and a little negligence in this respect may cost the life of his confiding patient. He should, under no condition, attend a case of labor wearing the same clothes he wore while performing an autopsy, or which he had worn in attendance upon a case of erysipelas, diphtheria, septicæmia, or other disease, from which the infection may be carried by clothing.

To speak of having a labor conducted upon strictly aseptic principles seems incredible to some physicians, and they smile at the idea. I will admit that in some cases it is impossible, but I affirm that in the majority

of cases, even in private practice, it is not only possible, but practical, to very nearly maintain complete asepsis throughout labor; and, with a competent nurse in attendance, throughout the puerperium.

When I have been engaged to attend a woman in confinement, I try to give careful and full directions for the preparation of the patient and her surroundings. She is to have prepared for the occasion the following articles: At least two gowns, three pairs of sheets and pillow cases, two pairs of white stockings, from six to twelve towels, about the same number of vulva pads, and an abdominal binder, all of which must have been boiled for an hour, carefully dried, and pressed, and wrapped in a sheet, which has also been boiled, and the package placed where the dust can not reach it.

She is also to have ready a pad, about eighteen inches square, made of a pound or two of absorbent cotton, covered with sterilized gauze, which is to be placed underneath the buttocks to catch the discharges, or, two folded sterilized sheets may be used for this purpose, also, a piece of new white gutta-percha cloth, forty inches wide and five or six feet long, to go beneath the sheet and pad to keep the mattress dry and clean. I request that a new fountain syringe and a bottle of bichloride of mercury tablets be provided, neither of which is to be opened until I am ready to use them. They are to have ready plenty of boiling water and two bowls for my use.

As soon as the first pains come on, if the woman's bowels have not acted freely during the day, she is to have an enema of warm salt-water, so that during labor there will be no danger of infection from fæces. She then is given a full warm bath, if convenient, and always a hip bath, being careful to scrub and cleanse the thighs, pubes, vulva, and perineum. She then puts on a sterilized gown and a pair of white stockings, the rub-

ber cloth is placed on a mattress, the perineal pad and sheets are placed over that and as much other bed clothing over the sheets as may be necessary to keep the patient comfortable. There is to be no sweeping or dusting, in order to make the room appear tidy, and in changing the bed clothes, and making other movements about the room, there is to be as little dust raised as possible.

From the way this reads some may suggest that the labor would be ended before the preparations had been carried out, but in reality they give but little trouble, and do not consume more than half an hour's time, at most, and they give the patient and her attendants something to do and think of until the doctor appears upon the scene. It is also quite inexpensive, the whole outfit not costing over two dollars. It is simple cleanliness, and can be carried out in the great majority of the homes we visit.

The physician should wear a sterilized gown, or, at least, an apron, to protect the woman against infection from his clothing, as well as to protect his clothing from the discharges. While the physician is sterilizing his hands, which should be done as thoroughly as for an abdominal section, the attendant bathes the woman's vulva and adjacent parts in a 1-1000 solution of mercuric chloride. The method which I prefer for sterilizing the hands is that used in the von Bergmann surgical clinic. The hands are first thoroughly scrubbed for five minutes, if possible, with green soap and warm water, dried on a sterilized towel, then rubbed for a minute in eighty per cent. alcohol, then immersed for a few minutes in a 1-1000 solution of mercuric chloride. A bowl of bichloride, or a one per cent. lysol solution, is kept by the bed, into which the hands may be dipped before making the vaginal examinations, which should be

very frequent and the finger should never actually be carried inside the cervical canal.

When necessary to use any instruments they should be sterilized in a boiling soda solution. Every tear, or laceration of the perineum, of importance, should in every case be immediately repaired.

As I have said, I am opposed to any antiseptic douche, either before, during, or after labor, unless there is reason to believe that the genital tract is already infected; but if instruments are used, or the hands introduced into the vagina or uterus, unless certain of asepsis, a cleansing douche should be given after such manipulations. After labor the woman's genitals should be washed with plain boiled water, and a 1-1000 solution of mercuric chloride and an aseptic vulva pad placed in position. Afterward, when the pads are changed, the parts should be similarly cleansed.

In some homes, in which we are compelled to attend cases of labor, asepsis is impossible. Under such conditions, we can only follow Rudyard Kipling's advice, "Do your best and leave the rest alone."

THE TREATMENT OF PUERPERAL INFECTION.

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Puerperal Infection, in the broad sense, means any kind of infection occurring in any part of the body during the puerperal period. In this paper, however, I shall use the term in a restricted sense and consider only those cases in which the infection begins in the uterus.

This infection may be with one or more of the pyogenic bacteria, producing a septic endometritis, or it may be with certain saprophytes, producing a putrid endometritis. The former produces a true septicæmia, while the latter produces a sapræmia.

In putrid endometritis, the infection is superficial, and when pure and unmixed with pyogenic bacteria, is incapable of producing death. The chief danger of putrid endometritis is that it will become a septic condition by the introduction of pyogenic bacteria.

In septic endometritis the infection is also superficial, at first. Later, it penetrates the uterine walls and enters the peri-uterine structures through the lymphatics and veins and, if not checked in its progress, will produce a general lymphangitis. It is difficult to make an early diagnosis between a case of septicæmia and one of sapræmia. The clinical symptoms are almost identical and the only way of determining this question positively is by bacteriological examination. Few physicians are expert in making cultures for bacteriological

examination, and even if they were, valuable time would be lost in making a diagnosis that, for practical purposes, is almost useless. In a case of virulent streptococcus infection, so much time would be lost that the infection would probably have made progress enough to destroy the usefulness of the patient's generative organs, if it did not destroy her life. It is dangerous to wait in these cases. We are assuming a great responsibility when we do so. We are the guardians of our patients' health and lives. It is our duty to act and act at once. It matters not whether the case be one of septicæmia or of sapræmia, it is our duty to treat it as one of septicæmia. If the case is one of sapræmia, the treatment will not only do no harm, but will effect a cure.

The treatment of puerperal infection is preventive and curative. As the disease is one of bacterial origin, the treatment, both preventive and curative, must be largely germicidal. While the preventive treatment of these cases is of as great or greater importance than the curative treatment there are so many good methods for their management, given in the different text books of obstetrics, that I will only consider one point in that connection.

Whenever the interior of the uterus is invaded for any purpose, either during or after delivery, it should, afterward, be irrigated with hot sterile normal salt solution and firmly packed with iodoform gauze. This should be removed at the end of forty-eight hours and the uterus re-packed loosely with the same material. At the end of another forty-eight hours this packing is removed and the patient put upon ergot and quinine.

Most physicians do not agree with me in packing the uterus with iodoform gauze. I have never seen any bad results following its use and on several

occasions I believe it has done good. When the hand is passed into the uterus, for any purpose, a certain amount of traumatism is inflicted upon the interior of that organ. The report comes from the bacteriological laboratory of Johns Hopkins that it is impossible to render the living hand aseptic. This being so, there is always danger of carrying pyogenic bacteria into the uterus on the hand. Unless some step is taken to check these organisms, they find, in the puerperal uterus, the most favorable conditions for growth. I prefer to attack these germs, if any have been introduced, before they have had time to do any damage. Hence, I pack the uterus. The gauze packed into the uterus in this way, it seems to me, acts beneficially in three ways. It acts as an antiseptic on the interior of the uterus; it prevents hemorrhage and, being a foreign body in the uterus, it stimulates uterine contractions.

As yet, it is impossible to make any technique perfect, and in spite of every precaution a small percentage of parturient women will become infected. When this is the case the treatment must be promptly begun and thoroughly carried out. It is a fact that a majority of women who have an elevation in temperature after delivery will recover in a few days without treatment. But, among the remainder there may be some cases of virulent streptococcus infection which will die in a few days, if not treated. I prefer, always, to employ a method of treatment that will do good in all cases and harm in none.

When a woman, from a few hours to several days after delivery, has a chill, with sudden rise in temperature, the cause of the disturbance must be placed in the uterus. If the uterus is proved to be the offending organ, the treatment given below should be begun at once. Here the time-element is important. Treatment should

be instituted, if possible, before the infection has penetrated the endometrium.

Puerperal infection is a surgical disease and should be treated upon surgical principles.

Treatment. As putrid infection is always superficial and septic infection is at first superficial, if the case is seen early enough, the treatment should be begun by giving intra-uterine irrigations of normal salt solution or saturated solution of boric acid. If this treatment is begun before the infecting organisms have penetrated the decidua it will cure. If, however, the organisms have penetrated the decidua, some antiseptic, which will be absorbed more rapidly than the invading germs can advance, must be used. Iodine from iodoform is best for this purpose. If the bacteria have penetrated deeper into the walls of the uterus, or invaded the peri-uterine structures, curettage and opening of Douglas' cul-de-sac, with the proper application of antiseptic dressings, must be resorted to.

In all this work the strictest aseptic precautions must be observed. The field of operation, the hands and forearms of the operator and his assistants, the instruments, the irrigating fluids, and all dressings must be made sterile.

Irrigations. In giving the irrigations no anæsthetic is required. The patient is placed on a table in the lithotomy posture, with a Kelly pad, or some other device for catching the irrigating fluids, under her buttocks. The perineum is drawn back with a short Jackson's retractor. The anterior lip of the cervix is caught with a pair of blunt-pointed bullet forceps and drawn down as far as possible. The largest size return-flow irrigating tube is passed into the uterus to the fundus, great care being taken that it does not touch any part of the patient's body before being introduced into the

uterus, and the greatest gentleness being used in order to avoid bruising or lacerating the endometrium. The tube connected with the douche-bag is now attached to the douche-tube and at least eight quarts of normal salt solution or boric acid solution at a temperature of 110° or 115° F. introduced. The douche-bag should be at least five feet above the patient, so as to produce a strong current in the tube. If the patient's temperature is not normal in an hour, the douche is to be repeated, and so on, until six such douches have been given.

If, an hour after the last douche has been given, the patient's temperature is elevated, it is an indication that the infecting organisms have penetrated the decidua, and the uterus should be packed with 10% iodoform gauze. No anæsthetic is required. The patient is placed in the lithotomy posture; the perineum retracted, and the uterus drawn down as in giving the douches. The end of a strip of iodoform gauze, four inches wide, is caught with a pair of Hunter's sponge forceps and carried to the fundus. The strip is inserted until the uterus is firmly packed. The vagina is then packed with the same, and the patient put to bed.

The uterine secretions act upon the iodoform in the gauze, liberating free iodine, which is absorbed and acts as an antiseptic as it passes through the tissues. That free idoine is liberated and is absorbed is proved by the fact that it is present in the urine within a few hours after the packing is done. If the temperature is normal twenty-four hours after the uterus has been packed, the gauze should remain twenty-four hours longer and then be removed. It should not be renewed.

If, however, at the end of twenty-four hours the patient's temperature is not normal, the infection has probably pased beneath the endometrium, or even invaded the peri-uterine structures.

In this event, curettage and opening of the cul-de-sac must be resorted to.

Curettage. In order that the uterus may be thoroughly curetted, it is always necessary to employ an anæsthetic in this operation. The patient is placed in the lithotomy posture, the perineum retracted, and the uterus drawn down. The largest size sharp curette is passed into the uterus and the whole of the interior of the organ systematically curetted. No force is necessary, as the decidua is soft and comes off easily. As the uterus is soft, some care must be exercised to avoid puncturing its walls. The bleeding will be profuse, but it need not be heeded. After having been thoroughly curetted, the uterus is irrigated with normal salt solution and firmly packed with 10% iodoform gauze. The vagina is packed with the same. At the end of forty-eight hours this dresing is removed and the uterus and vagina repacked lightly with 5% gauze. At the end of another forty-leight hours this is removed and no more applied. The patient is then put upon ergot and quinine.

This will cure all cases of sapræmia and many cases of septicæmia, but in some of the cases where the infection has invaded the peri-uterine structures this will not cure. If the symptoms have not subsided within forty-eight hours after curetting, the cul-de-sac must be opened and antiseptic dressings applied to the pelvis. When curettage is done for *sepsis* it is always best to open the cul-de-sac at the same time. It is impossible to tell how far the infection has traveled, and as the operation is a simple one and devoid of danger, I prefer to employ it early, lest the infection get away from me and do irreparable damage.

As the peritoneal cavity is invaded in this operation the aseptic precautions observed should be the most rigid.

Cul-de-sac Operation. The patient is anæsthetized and placed in the lithotomy posture. The perineum is retracted, and the uterus drawn down as in curettage. When the uterus is drawn down the vaginal mucous membrane is put on the stretch and it is impossible to locate the exact line where it is attached to the cervix, but by shoving it back slightly a fold appears in the vaginal mucous membrane, just where it is reflected from the cervix. The position of this fold is noted or marked by a slight cut. The cervix is then drawn down again and, with a pair of scissors, an incision is made through the vaginal mucous membrane *only* at the line marked. This incision is transverse to the cervix and about one inch long. No more cutting is done. After dividing the vaginal mucous membrane it is an easy matter to push the end of the finger through the remaining tissues into the peritoneal cavity. In doing this the ball of the finger should be used and not the nail.

When the finger is removed there is a discharge of fluid from the peritoneal cavity. The character of this should be noted. Having entered the peritoneal cavity, the posterior retractor is removed, the uterus drawn well down, and a digital examination of the pelvic organs made through the opening in the cul-de-sac. If any adhesions exist they are carefully broken up. This breaking up of adhesions should be as thorough as possible, the object being to open all lymph spaces, in order that the secretions may drip down upon the dressings to be applied and drained off by them, instead of being confined between the planes of adhesions that formerly existed, and, also, that all possible surface for the absorption of iodine, from the iodoform gauze, may be obtained.

If there is an effusion of lymph by the peritoneum it shows that there is a fight going on between the invading

bacteria on one side and the living cells of the body on the other, and it is the duty of the operator to assist the latter.

Having examined all the organs and having broken up all adhesions, the first finger of both hands is passed through the opening in the cul-de-sac, turned back to back and the opening stretched to the level with the sides of the cervix. Everything is now ready for the appilcation of the dresings, which should be done as follows:

The perineum is retracted with a long Jackson's, or a Péan's retractor; the uterus is held forward with a Pryor-Péan trowel and each side is retracted with a suitable lateral retractor. The end of each of these retractors passes through the opening in the cul-de-sac, so that, when traction is made, the sides of the opening are separated as much as possible.

The iodoform gauze, 10% in strength, is cut in strips four inches wide and a yard long. These are folded until each piece is four inches long, about one inch wide and one-half inch thick. One end of this folded piece of gauze is caught with a pair of long dressing forceps and passed through the cul-de-sac opening into the pelvis to the level of the fallopian tubes, the other end remaining in the vagina. This piece of gauze is drawn well to one side with one of the lateral retractors, and another strip inserted in the same way. This procedure is continued until the pelvis is well filled with gauze and the uterus surrounded by it, except in front. All retractors are now removed and the vagina packed.

If the patient's pulse runs above 140 beats to the minute under the anæsthetic, an intra-venous infusion of normal salt solution should be given at once. This not only stimulates the heart, but causes an improvement in the action of the kid-

neys. Strychnia should be given in small doses. If alcoholic stimulants are indicated, brandy or champagne is best. In nearly all these cases, the amount of muddy, toxine-laden, serum drawn from the pelvis by the gauze is great, and, unless some provision is made for this loss of fluids, the patient will feel it. In these cases, therefore, it is always advisable to give high saline enemata. From eight to sixteen ounces should be given from every three to eight hours. Water is given as soon as nausea has subsided. I would begin by giving one ounce every hour and increase the amount gradually. If the vomiting is persistent one ounce of champagne given every hour is the best remedy. The urine is drawn by catheter every three hours and tested for albumen and iodine. No food is allowed for eighteen hours. The first nourishment given is a little chicken jelly or beef juice. The bowels are moved at the end of forty-eight hours. The vaginal and uterine dressings are removed in from forty-eight to seventy-two hours. The vaginal packing is renewed, but the uterine is not, unless the symptoms of sepsis persist. The cul-de-sac dressing is removed at the end of a week and a lighter one applied. After this it is renewed every three to five days, until the opening closes. When the opening has closed, ichthyol or boro-glycerine tampons are used to hasten involution.

Pryor, of New York, in conjunction with Dr. Jeffries, the bacteriologist at the New York Polyclinic, has made a pretty thorough investigation of the effect which these dressings upon the streptococci found in these cases. In every instance, it was found that they completely sterilized the field of operation, even though pus was found free in the peritoneal cavity in one case. This was usually accomplished by the third dressing,

but in one case it was not until the fifth had been applied.

I do not claim any originality for the different means employed in this method of treatment. The method of procedure is that which I would employ, and is based upon my observations while at work in the hospitals of New York. I believe that the treatment is based upon sound surgical principles and, if properly carried out, will cure most cases.

The application of the cul-de-sac operation to these cases is distinctly Pryor's. He was the first to use it and the credit belongs to him. He has employed it in the treatment of eighteen cases of streptococcus puerperal infection and has lost one case. That woman was in a moribund condition when brought into the hospital. She was admitted in order to relieve her family physician of the responsibility incident to having punctured the uterus with a curette.

THE DIAGNOSIS OF CEREBELLAR TUMORS.

[With Report of a Case and Operation.]

By B. L. Wyman. M. D., Birmingham, Ala.

Junior Counsellor of the Medical Association of the State of Alabama.

Until recent years the subject of brain tumors possessed very little interst to the practitioner beyond the interst felt in the diagnosis, but owing to the increased knowledge gained by a study of the localization of brain functions, together with the marvelous achievements which have been wrought in brain surgery, these cases are attracting increased attention both on the part of the neurologist and surgeon. The diagnosis of these tumors is comparatively easy. The only questions which arise after the diagnosis has been made are these: First—What is the location of the tumor? Second—Can it be removed by the surgeon's knife? If the symptoms indicate that the tumor lies upon the convexity, or surface of the brain, the operation is a comparatively simple one, and can be done with very little danger to life. If, however, it is sub-cortical, or lies at the base, its removal may be accomplished with great difficulty, or it may be altogether impossible. It is undoubtedly true that a large per cent. of these tumors cannot be reached.

Perhaps there is no other disease of the brain in which medical treatment accomplishes so little, except in cases of syphilitic origin. The prognosis of non-syphilitic tumors is so hopeless under all ordinary methods of treatment, that I take it that any procedure is justifiable which promises any hope of relief.

Surgical and neurological literature is replete with reports of successful operations in the removal of these tumors. So far as cerebellar tumors are concerned, they are the most difficult to reach, on account of their location. However, a number of cases are on record in which the operation has been undertaken and has been entirely successful.

The diagnosis of cerebellar tumor is not difficult. Besides the general symptoms of brain tumor, headache, vomiting, vertigo, mental impairment and optic neuritis, which are common in all brain tumors, we find characteristic localizing symptoms of great value. When the tumor is situated in the lateral lobes of the cerebellum no focal symptoms are developed, unless the neoplasm presses upon the adjacent structures. Whenever the middle lobe is encroached upon the patient develops a peculiar staggering gait. He feels himself falling and reels very much like a drunken man. His steps are short and his legs are spread out for fear of falling. In many cases it has been observed that the patient staggers or inclines his head toward one side with remarkable constancy. The development of cerebellar ataxia indicates that the middle lobe is either the seat of the tumor or that it is encroached upon by a tumor in the hemispheres. When the head is inclined persistently to one side, the tumor, as a rule, is upon the opposite side. We frequently find in connection with these localizing symptoms other secondary symptoms from pressure, as paralysis of the cranial nerves, with glycosuria.

I desire to report a very interesting case which came under my observation last year in a patient who exhibited all the symptoms of cerebellar tumor.

C. C. Kitchens, age 23; farmer; residence, Walker county, Alabama. The patient was referred to my

clinic at the Birmingham Medical College, in February, 1899. His uncle, who accompanied him, gave the following history: Father and mother living, and in good health. Has three brothers and one sister, in good health. One maternal uncle died with consumption. There was no history of syphilis. The patient's health had been good, with the exception of chills and fever, until five years ago, when he had an attack of la grippe. Shortly after this he was struck on the back of the head with a pair of brass knucks. He was carried home in a semi-comatose state and was confined to the house about three weeks. His uncle did not know what was his exact condition during this time. He thinks he was not comatose, but more or less stupid and confused, mentally. After recovering from the effects of the blow he was able to be out, and do light work about the farm. He complained, however, more or less of headache and his mind gradually became impaired.

The headache was sometimes confined to the occipital region, at other times it was temporal and frontal, and was accompanied by vertigo and periodical attacks of vomiting. His mind gradually became impaired. About one year prior to the time I saw him it was noticed that his walk was unsteady and he began to stagger and reel, and would frequently fall down. His eyesight became impaired, and his mind was more or less affected. These symptoms gradually increased and his condition became so pitiable that his family sent him to Birmingham with the request that some operation be done for his relief. His family believed that his trouble was the result of a fracture of the skull, produced by the blow upon his head.

Upon examination of the patient I found a man of apparently twenty-five or thirty years of age, with a

rather low degree of intelligence. He was somewhat emaciated and presented an anxious expression of countenance. He appeared stupid in conversation, but became at times restless and emotional, and his mental faculties were considerably impaired. His memory was poor. Some questions, he answered intelligently. His speech was slow and hesitating. In walking, he staggered like a drunken man. Upon observing him more closely, I noticed that his head inclined to the right side and he staggered towards the same side. Sometimes in sitting in a chair he would occasionally fall backward.

There was no marked motor paralysis of the arms or of the legs, but slight weakness was observed in the grasp of the right hand. There was slight ptosis of the left eye. Upon lateral movement of the eye-balls nystagmus was very marked. Dr. L. G. Woodson, upon examination of the eyes, reported optic atrophy in both eyes, but more marked in the left. Vision impaired in both eyes. The doctor expressed the opinion that the patient had an old fracture of the petrous portion of the temporal bone, probably involving the semi-circular canals. Temperature 99. Pulse 100.

After a careful examination and analysis of all the symptoms, both general and local, I made the diagnosis of tumor of the brain and located it in the cerebellum, and expressed the opinion that the pressure was probably upon the left hemisphere, and advised exploratory trephining. On the following day, the patient was admitted to the Birmingham Medical College Hospital, and at the surgical clinic Dr. B. G. Copeland operated. The night before the operation the patient's head was shaved and the scalp was thoroughly scrubbed and enveloped in sterilized gauze. After the patient was thoroughly anæsthetized with chloroform, I marked

out with pyoktanin the location of the tumor. Dr. Copeland made a large horse-shoe incision through the scalp, with the upper angle of the wound above the superior curved line of the occipital bone. The scalp was turned back and the bone exposed. Upon removing the periosteum there was found evidences of an old linear fracture, with some depressions. The doctor, with chisel and mallet, removed a considerable area of depressed bone and exposed the dura mater, which pulsated normally. He then proceeded to probe and explore with a long needle and felt points of very decided resistance, deeply located in the region of the left hemisphere of the cerebellum. The resistance appeared so deeply seated at the base that he did not open the dura mater and made no further exploration, concluding that if the tumor was present it was beyond the reach of the surgeon's knife. The wound was closed and the patient put to bed. He rallied from the anæsthetic, but suffered considerable shock, from which he never did entirely recover. On the following day his temperature rose to 101, pulse 120 and he began to spit up brick-dust sputa. In a few hours acute pneumonia developed. The patient died on the following day, the third day after the operation. It might be well to add that the day upon which this operation was performed was extremely cold, the temperature being ten degrees below zero.

Autopsy was held four hours after death and only the brain was examined, as the body was to be shipped on an early train. On removing the calvarium there was nothing abnormal found upon the convexity of the brain. The wound was healthy and there was no inflammation of the membranes around the seat of operation. Upon removing the brain there was found lying deep in the posterior fossa at the base of the brain a large nodular tumor, situated in the sulcus between the basal surface of the left occipital lobe and the anterior margin of the left hemisphere of the cerebellum. The

tumor had evidently grown from the pia mater and was attached by string adhesions. It formed no part of the cerebellum, but had by pressure flattened and displaced the left hemisphere. The tumor was sent to Dr. Bondurant for microscopic examination, but no report was ever received from him, as it was at a time when a very interesting event in his life was about to be consummated.

The gross appearance of the tumor indicated that it was tubercular. This case was an interesting one, on account of the characteristic localizing symptoms and the fact that there was a history of traumatism. If the dura mater had been opened it is very doubtful to my mind whether this growth could have been removed.

M. Allen Starr, of New York, several years ago, collected and published the statistics of cases of cerebellar tumors, in which surgical interference had been attempted, with the results of operation. He reported sixteen cases. Of this number, there were nine in which the tumor was not found, two in which the tumor was found but could not be removed, three in which the tumor was removed and the patient recovered, and two in which the tumor was removed and the patient died. These results, published several years ago, are not by any means encouraging for the operation. I have not had time to look up the recent literature upon the subject, but during the past few years a considerable number of cases have been reported, in which the operation was successful, and I believe if the statistics were compiled now they would show a larger percentage of successful results than those reported by Starr.

From what has been said it seems imperative for every practitioner to study carefully every case in which the symptoms point to a tumor of the brain, and if relief does not follow the use of large and increasing doses of iodide of potassium, the question of operative interference should be considered.

FORMALDEHYDE AS A THERAPEUTIC AGENT.

By Duke William Goodman. M. D., Mobile, Ala.
Junior Counsellor of the Medical Association of the State of Alabama.

Formaldehyde or Formic Aldehyde is a colorless, gaseous body, with a pungent odor, very irritating to the mucous surfaces of eyes and nose, and with powerful antiseptic and bactericidal properties. It was discovered some thirty years ago by a German chemist, Hoffman, but for a long time remained a chemical curiosity. Gradually its bactericidal powers were recognized and with this came its use as a disinfectant and preservative, and, as such, its status is thorouhly established. It appears in the market as an aqueous solution of varying strength, the standard being a 40% one, and known, commonly, as formalin.

As a therapeutic agent, it is new and but little tried. My object in this brief dissertation is to give the results of my search for reports of cases in which it formed a part or the whole of treatment.

As was natural in experimenting with a remedy of such antiseptic properties, its use in local application was first tried. Thus, in 1894, Valude & Dubrief, of Paris, on account of its great diffusibility and antiseptic properties, deemed by them superior to corrosive sublimate, claimed brilliant results in cases of ocular suppuration, such as purulent conjunctivitis, by the instillation of drops of a 1 to 200 solution. Their claims were subsequently verified by other experimenters. At a meeting in 1896 of the Parisian Society of Derma-

tology & Syphilography, Poitevin reported on the treatment of skin parasites with Formaldehyde, stating that it is the safest and most reliable of antiseptics, for its vapors diffuse readily even through masses of fatty matter. This property makes it specially suitable for the treatment of deeply implanted diseased hairs. He advised the application of a layer of absorbent cotton dipped in a 2% formalin solution and covered with oil-silk.

In the same year Schleich, a distinguished German surgeon, published an article entitled "A new method of treating wounds antiseptically." This is done by the use of formalin-gelatine, prepared by adding 25 drops of formalin to 500 grams of pure gelatine in solution and evaporating to dryness over formalin vapor. The product is powdered and is preserved in formalin. This is known commercially as Glutol.

Dr. Geo. M. Gould writes of it as a very valuable material in the treatment of infected wounds, sinuses, ulcers, abscesses, furuncles, and like conditions, and pronounces it a new and valuable agent for the surgeon.

Dr. A. Ravogli, of Cincinnati, Ohio, in the Journal of the American Medical Association of Nov. 18, 1899, has a very interesting and instructive article on the nature and treatment of cutaneous cancer. He reported several cases of superficial epithelioma treated with formaldehyde, either in solutions varying in strength from 4 to 10%, or with a paste composed of chalk and oxide of zinc, equal parts, incorporated with formaldehyde, in all of which he got remarkably good results. He continues as follows: "It seems that the penetrating power of Formaldehyde is greater than is usually supposed. Prof. De Rechter, of Brussels, was testing its power on human and animal cadavers exposed to the fumes of a 40% solution. The cadavers could be kept

for months, without any trace of decomposition, or, if it had already begun, it was immediately checked. In cadavers of guinea pigs that had died from anthrax or tuberculosis, and also in the lungs from tuberculous cows, the organs were found completely sterile in two to six days. These tests prove that the Fomaldehyde penetrates the whole substance of the cadaver and kills the bacteria and anthrax spores in them." By virtue of this penetrating power he claims that Formaldehyde is able to reach the nests of cells of the superficial cancer and to reduce them to a hard detritus, which is subsequently sloughed off from the normal tissues. Before applying the paste, he cocainizes the surface to diminish the pain, and increases the action of the paste and prevents its too rapid evaporation by covering it with a piece of rubber or oiled silk.

Dr. William Mitchell, in a recent number of the British Medical Journal, described his treatment of a sarcoma of the cheek, about 4 inches in diameter, by curetting and applying a 20% solution of Formaldehyde. This was repeated until the tumor was entirely removed.

I have been able to find but little literature on the use of Formaldehyde in gonorrhœa. Lamarque has used, with good results, a 1% solution for washing out the bladder and urethra in chronic gonorrhœa. Orloff, another Frenchman, observed under its influence a rapid disappearance of the gonococci from the discharges, and the changing of the character of the latter from purulent to serous. A very limited use of a 1% solution in my own practice has shown me its efficacy. I add to the solution of Formaldehyde ½ dram of bi-carbonate of soda to the pint with the idea of neutralizing the formic acid which is almost certain to be present in the Formaldehyde and to which much of its irritating property is due. From my clinical experience I should say that bet-

ter results will be obtained in the chronic or sub-acute stages of gonorrhœa than in the acute. Here, the penetrating power of the Formaldehyde enables it to reach the gonococci hidden away in the submucous tissues, and often beyond the reach of our ordinary remedies.

Of the use of Formaldehyde in whooping cough Olliphant writes most enthusiastically in the New York Medical Journal, March 4, 1899. From his experience with formalin in this disease he is fully convinced that it is as much of a specific for pertussis as mercury is for syphilis, or quinine for malarial fever, and states that the duration of the severest cases was less than a week, several cases being cured by three applications. Out of 20 cases treated with this remedy not one failed to be cured within 8 days. Hinman ,of Atlanta asserts that inhalations of Formaldehyde manifestly diminish the number and intensity of the paroxysms in whooping-cough, and shorten the duration of the affection. He administers inhalations of a 1% solution 3 times daily for from 2 to 20 minutes, as the patient is able to bear it. Other physicians report good results from its use in this disease.

In the strenuous, almost frantic, search after a successful remedy for pulmonary tuberculosis, it was but natural that Formaldehyde should be largely experimented with, and from various sources encouraging reports have been made. In the summer of 1897, Surgeon P. C. Kalloch, of the Marine Hospital Service, instituted a tentative treatment of several cases of tuberculosis which came under his care in the hospital at his station. He obtained improvement, more or less marked, in every case, and ends his report thus: "I believe that properly given, one or two sittings a day of half an hour each, Formaldehyde will prove a most important remedy in tubercle. The results, as observed by me, have been, (1) improvement in the character and quantity of the expec-

toration; (2) Healing properties, as shown in lessening the tendency to hemorrhages; (3) Curative, as shown by general improvement of symptoms."

About a year ago Murrell reported, in the British Medical Journal, the results of a comparative treatment of tuberculous patients with air impregnated with oils of cinnamon and peppermint, and with the vapor of Formaldehyde. The observations covered a period of six months, and as far as the oils of cinnamon and peppermint were concerned the results were uniformly unfavorable. Bacteriological investigation further showed that the vapor of neither oil had any deleterious influence upon tubercle bacilli in culture. On the other hand, it was found that a 6% solution Fomaldehyde was not only well borne by the patients but proved capable of retarding and inhibiting the growth of the tubercle bacilli in culture and yielded encouraging therapeutic results. Of twenty patients suffering from pulmonary tuberculosis treated with Formaldehyde inhalations the outcome was for various reasons inconclusive in six. Of the remainder, 12 were *much* benefitted, and 2 were slightly improved. A 6% solution was employed as a rule, but the proportion was increased or diminished according to the idiosyncrasy of the patient.

At the Congress of Tuberculosis, held in Berlin last May, the use of formaldehyde was under discussion, both as a disinfectant for the room of the patient, to prevent the attendants contracting the disease, and as a direct remedial agent. The inhalation of Formaldehyde was recommended as extremely efficacious, especially by Cervello of Palermo. On the same occasion Birch-Hirshfield made the pertinent and pregnant statement that nearly all cases of death during the first stage of pulmonary tuberculosis show, on autopsy, that the disease begins in the mucosa of a medium sized bronchus. If this be true, surely, there is the place, and then is the

time, to make the attack with the Formaldehyde vapor. J. Hahn, of Leipsic, according to the Journal of the American Medical Association of July 8, 1899, has used a formalized glycerine, 1 to 5%, as an injection in tuberculous abscess. He regards it far superior to any substance yet used and pronounces it especially effective in knee and hip-joint abscesses. Morphine may be required for the pain caused by the injection. The treatment is repeated in two weeks.

In dentistry, formaldehyde has been used for abscess and fistula with fair results.

In acute and chronic nasal and pharyngeal catarrh, much good has been claimed from its use. My experience, both personal and clinical, as far as it goes, is favorable to formaldehyde. In rhinitis, where a 5 to 10% ointment has been applied frequently to the nasal mucous membrane, I have seen marked and speedy improvement.

Formaldehyde was used in a few cases of hay fever last summer, but the season was so near over when the experiments were instituted that the reports of good results were not reliable. This summer more extensive use will be made of it in this stubborn and intractable disease, and I confidently await more satisfactory accounts.

So far, I have called your attention to the use of formaldehyde proper. Its polymers and compounds, in solid form and under many proprietary names, have been much used in genito-urinary diseases. Other members of this Association doubtless have had much more experience with these compounds than I have had, and it is to be hoped will submit the results of their observations in a discussion of the subject. A limited use of cystogen inclines me to favorably consider its claims as a genito-urinary germicide and as an excellent solvent of uric acid.

SOME OBSERVATIONS ON THE VALUE OF VACCINATION AS A PREVENTIVE OF SMALLPOX.

By Henry Green, M. D., Bolling, Ala.

Member of the Medical Association of the State of Alabama.

I shall not tax your patience, nor impose upon your good nature, by attempting to give you a wearisome array of statistics in support of my contention that vaccination prevents smallpox. What I will try to give you, in as few words as possible, is some of my personal experience.

In 1898 I was physician to a convict camp at the mill of the Milner, Caldwell & Flowers Lumber Company, at Bolling, Ala. As most of you are perhaps aware, the convict regulations require that all convicts shall be vaccinated. My rule at this camp was to vaccinate about every three months, as we were constantly receiving new men in place of those whose terms had expired. I examined every convict and vaccinated all who did not show the typical pitted scar.

On the 14th day of April, 1898, Mr. Smith, a deputy, went to Evergreen to get five prisoners who had recently been sentenced. I vaccinated the five convicts on the day after their arrival at the camp, along with a number of others who had been brought in since I had last vaccinated. About ten days after having been in the Evergreen jail, in which we afterwards learned there had been a case or two of varioloid, Mr. Smith was taken

sick and in a few days developed a typical case of confluent smallpox. About the same time two of the convicts, one man and one woman, who had come from Evergreen, complained of being a little sick, had slight rise of temperature, headache, etc., and in a day or two I found they had varioloid. It was well nigh impossible to tell who had been or who had not been exposed to these two convicts, as they had been working about the mill and eating in the same mess-room with their fellows, about one hundred and twenty-five in all. So, we decided to isolate only those who had slept in the same room with the sick, and watched carefully for suspicious symptoms in the others. Accordingly, two cabins were built in the pine woods near the mill and the sick woman and two other convict women, who had been sleeping with her, were put in one cabin, and the sick man, and six other men, who had been occupying the same room with him, were put in the other cabin. These eight well ones stayed out in the cabins with the sick ones; ate, slept, and freely mingled with them until desquamation was complete, and all danger of infection had passed. Every one of these eight had good vaccine scars, and were re-vaccinated as soon as smallpox was suspected in the camp. I neglected to say that I re-vaccinated every convict in the camp and every person in the village who would submit to it, as soon as the diagnosis was made.

Now, the points to which I wish to call your attention are: 1st. Mr. Smith had never been vaccinated, and upon slight exposure contracted a malignant variola. As soon as I suspected that he had smallpox, which was not until the eruption appeared, I vaccinated his entire family, consisting of his wife and six children, all of whom had been in the room with him up to this time. He was isolated in a little house about seventy-

five yards from his dwelling, and there he stayed until desquamation was complete. None of his family took the disease.

2d. About one hundred convicts, well and repeatedly vaccinated, were exposed, more or less, to the two who took sick in prison. These, however, were only exposed to the initial stages, and none of them were infected.

3d. Eight convicts who had been most intimately exposed were carried to the same pest house with the sick ones and freely mingled with them until they were entirely well, thus being exposed to all stages of the disease. They were smallpox-proof, and only so on account of being thoroughly vaccinated.

4th. Dr. Watson, (whom I thank for valuable help), and myself attended Mr. Smith and the sick convicts; Dr. Watson staying at Mr. Smith's bedside several hours every day, on account of his severe illness. Both of us escaped; of course we were well vaccinated.

My honest belief is that had it not been for vaccination we would have had an epidemic of smallpox in that prison; and the facts I have stated give me ample reason for this belief.

My object in reporting this experience is the hope that it will strengthen and confirm some wavering brother's faith in vaccination. Of one thing I feel certain—vaccination will prevent smallpox. Failure is due, in my opinion, to a failure to produce vaccinia. I would urge every physician to be sure that the person vaccinated has a Jennerian sore, and not a septic ulcer. Do not be satisfied because an ulcer was produced that lasted three months and left a big shining cicatrix. The peculiar pitted scar is what you want to produce. I know that these ulcerating sores on a patient's arm tend to bring vaccination into disrepute, but I have not been able to avoid having such a sore once in a while. It is well nigh

impossible to prevent inoculation with septic matter occasionally. However, this is no argument against the efficacy of vaccination.

Before closing, I wish to call attention to the urgent necessity of legislative action to assist us in stamping out the disease that has existed, in varying degrees of malignancy, in our own and sister states for several years. It has cost our State thousands of dollars; left its disfiguring mark upon a host of our citizens; and filled a large number of untimely graves.

I would urge every member of this Association to take a personal interest in this matter, make it a point to see his Representatives to the next General Assembly and try to impress upon them the necessity of some action along this line.

DISCUSSION.

Dr. W.H. Wilder said:—There can now be no *question* whatever as to the value of vaccination; this was settled by Jenner, more than one hundred years ago, and for a physician of to-day to say he does not believe in vaccination is simply to argue and admit his ignorance of small-pox and its prevention.

The fault with most of us is that we do not begin vaccination early enough in infant life, and repeat it often enough in childhood and adolescence. Every healthy child should be vaccinated as soon as it begins to grow off nicely and increase in weight; this is usually from six to eight weeks from its birth. Children of this age do not suffer from any of the sequelæ of vaccination, sometimes experienced by older children and adults; in fact, there is scarcely any rise of fever in the infant after vaccination. Where there is danger of the new born babe being directly exposed to small-pox it is the duty of the physician to vaccinate the child as soon as

he ties the cord. This will frequently prevent the child from dying of small-pox. Children should again be vaccinated when they are old enough to attend school, and a third time about the age of puberty, and again during early adolescence. By this method we can frequently render a person immune for life. We cannot lay too much stress upon re-vaccination; if it does no good it cannot possibly do any harm. Physicians frequently make mistakes by telling patients they cannot possibly have small-pox after very severe inflammation from vaccination; the worst inflammations are by no means the most successful vaccinations; they are due to a mixed infection and cannot be caused by pure virus, properly applied and protected. In fact, I believe the germs that cause these severe inflammations tend to destroy rather than to increase the protection of vaccination.

I have found that the virus on points is not reliable, and does not keep long; that put up in glycerine and hermetically sealed in glass tubes has served me best. It should not be kept longer than thirty days, and should be put in a cool place, and never carried in the vest pocket where it is subject to the heat of the body.

The dose of vaccine virus necessary to produce good results is also worthy of consideration; it stands to reason that it requires more virus to produce a successful scar in a stout, robust man than in an infant, and experience has taught me that I get more successes where I use large doses of the virus and rub it in well. The part to be vaccinated should be where the circulation is full and free, and the wound should be made by scraping off the cuticle and not by scratching. No blood should be drawn by the operation.

Dr. D. L. Wilkinson said:—

The efficacy of vaccination is no longer a debatable question. In February last a case of small-pox broke out in the kitchen of the Dormitory of the Girl's Industrial School. More than one hundred persons were exposed. Successful and immediate vaccination of all put an end to a threatened epidemic. The public need education along this line. The question of personal rights cannot be considered when the welfare of a community is at stake. A man has no personal rights when the lives of many others are at stake. Dr. Green's paper is along the right line, and let us agitate this question until our legislators are compelled to act. This very year a man was put on the train at Montevallo, suffering from small-pox and sent a hundred miles, exposing every one with whom he came in contact. What redress was there? Sec. 1271, of the Code may cover the case, but what is the penalty? Possibly $100.00 fine, if you can secure conviction, but alas—"if"! Surely more stringent laws, and a more rigid enforcement of the present laws are necessary for the prevention and eradication of this most loathsome disease.

Dr. W. H. Blake said: Smallpox has been introduced into the prisons in this State at different times during the past three years. In these prisons from 50 to 100 convicts are confined together in a single large cell. In such cells convicts who had been exposed to smallpox were introduced and confined until they complained of being ill, and in some cases until the smallpox eruption disclosed the nature of the disease. Thorough vaccination enabled us to prevent the spread of smallpox among the inmates of these prisons. I think this demonstrates conclusively the value of the claims set forth in Dr. Green's paper.

THE NEED OF A SEPARATE PRISON FOR TUBERCULOUS CONVICTS.

By Wyatt Heflin Blake, M. D., Wetumpka, Ala.

Senior Counsellor of the Medical Association of Alabama.

The importance of this subject, I am sure, justifies me in repeatedly bringing it before this Association. The housing of large bodies of men, whether they be workmen in factories, soldiers in barracks, or prisoners in confinement, requires the best thought and the most careful attention in order to surround them with the most favorable sanitary conditions.

If any man is entitled to more consideration in regard to the hygiene of his dwelling than another, it assuredly is the inmate of our prisons. He is compelled to occupy whatever accommodations the authorities may provide for him, and to endure whatever conditions they may place around him.

Dr. Rohé, in his work on Hygiene, says: "The mortality of convicts, even in the best regulated prisons where especial attention is paid to the sanitary requirements of such buildings, is three times as great as among workmen in mines, confessedly, one of the most dangerous occupations." Confinement lowers the vital force and causes the system to yield more readily to disease. The disease which brings death to more convicts than all others combined, is consumption. Rohé says it causes from 40 to 80 per cent. of these deaths. His estimate is for the United States as a whole. Wild animals when

placed in captivity die rapidly of this disease, which, in their native state, was unknown to them.

Among the convicts of Alabama, consumption prevails to an alarming degree, and the death rate from this cause is on the increase.

In Alabama, the record of deaths for State convicts covers a period of 18 years. For the first half of this period, consumption caused 20.3 per cent. of the total mortality; for the last half, it caused 42 per cent. According to recent reports, of the total deaths in the penitentiaries of different states, the per cent. caused by consumption is as follows:

Mississippi, 20 per cent.; Arkansas, 20 per cent.; Florida, 30 per cent.; Ohio, 31 per cent.; Michigan, 33 per cent.; Alleghany County Work House, Pennsylvania, 33 1-3 per cent.; Virginia, 41 per cent.; Kentucky, 42 per cent.; Chester, Illinois, 60 per cent.; Joliet, Illinois, 70 per cent.; Huntsville Penitentiary, Texas, 66 per cent.; Rusk Penitentiary, Texas, 33 per cent.; Washington, 16 per cent.; Connecticut, 1898, 60 per cent.

In 1897, every death that occurred in the penitentiary of Connecticut was caused by consumption. According to the last national census, consumption causes 11 per cent. of all deaths among our free population.

In regard to the propagation of this disease, our present knowledge justifies the following statements: Every new case of tuberculosis must be derived from another case. The disease can only be transmitted from parent to offspring by transmission of the tubercle bacilli. The offspring of consumptive parents are less liable, under favorable environments, to have the disease than are men and women of healthy parentage who marry consumptives.

Flick says with regard to this disease: "The history

of tuberculosis in all times and in all countries is a broad demonstration of its contagiousness, and, by inference, of its preventability."

Osler recounts observations, made under Koch's supervision, where dust was gathered from buildings in which consumptives were confined, and out of 118 samples, 40 were infective and produced the disease in animals. Strauss performed the following experiment: In the nostrils of 29 nurses and hospital attendants, he placed plugs of cotton-wool to collect the dust of the wards. In nine of the twenty-nine cases, the cotton contained tubercle bacilli and proved infective to animals.

Prison management in Alabama furnishes conditions specially favorable to the propagation of consumption. Convicts are not kept in separate cells, but from 50 to 100 are confined together in a single large cell. Consumptive convicts, unless acutely ill, are confined in the same cells with non-consumptive ones.

An effort is made to cause those expectorating to spit into cuspidors containing a disinfectant, but this cannot be enforced. The results are: a prison atmosphere full of the germs of consumption, an alarming death rate from that disease, and this death rate on the increase.

There is only one remedy for this condition, and that is to separate the consumptive from the non-consumptive convicts. We need something more than separate wards in the same building, or separate buildings on the same grounds. We need a separate camp for consumptive convicts, the further from the other prisons, the better, in order to give the non-tuberculous prisoners the greatest possible immunity from this disease. With the organization of such a camp, and the exercise of painstaking care in detecting consumption in its early stages, and the prompt removal of such convicts to said camp, we shall have accomplished all that our present knowl-

edge of this disease points out as our duty in the premises. This would give the consumptive better treatment, and the well man a chance to remain well. In this matter, the duty of the State is plain. It has the right to deprive the offender of his liberty, but it has not the right to deprive him of his health. Think of the horrible fate of continuous confinement in the same room with a contagious and deadly disease! Such is the fate of every convict in Alabama to-day. To organize a separate camp for consumptives is the one great object I have sought to achieve during my term as Director of the Medical Department of the State Convict System.

Our law makers are not fully alive to the gravity of the situation. It behooves us as physicians to continue to agitate this subject. I am sure this much is due Alabama's prison population, whose labor is turning large revenues into our treasury. I am also sure that our humane and intelligent citizens will endorse the administration that carries out the prison reform suggested in this paper.

DISCUSSION.

Dr. H. Green said: I fully endorse everything Dr. Blake has said. As physician to a convict camp I have had the chance to see the direful effects of crowding sick and well together. Every few months at our camp we have a case of tuberculosis developing, and I doubt not as a result of direct infection. It is equivalent to an execution to some of these creatures to put them in prison (in many instances for minor offences,) where they will be forced to contract consumption. I deem it the duty of the State to protect her convicts' health and I think the establishment of a camp, such as Dr. Blake suggests, would contribute very much to lowering the present death rate from tuberculosis. I congratulate Dr. Blake. He deserves great credit for his persistent endeavors to correct the injustice that is being done the convicts of our State.

PROPHYLACTIC TREATMENT OF TUBERCULOSIS.*

By T. A. Casey, M. D., Albertville, Ala.
Member of the Medical Association of the State of Alabama.

The prevention of tuberculosis is a question which deserves the most serious consideration and careful study of every physician, every teacher in a public school or other institution of learning, every officer whose duty it is to make or execute law, and, in fact, everyone who cares for self-preservation and the common good of humanity.

Tuberculosis is an infectious, contagious, disease, the mortality amounting to more than that of all other contagious diseases combined and, in some instances, to more than that of all other diseases of every kind combined.

When I speak of an infectious disease I mean one that is produced by a micro-organism or specific virus.

A contagious disease is one that is produced by a micro-organism or virus which originates and attains its full development only in a living animal, and is excreted in an active state.

It follows that all contagious diseases are necessarily infectious, but all infectious diseases are not contagious. In other words, contagious and miasmatic diseases are

*Note—This paper was presented at the meeting of the Association, held last year, and should have appeared in the Volume of Transactions of that meeting, but by accident the manuscript was misplaced and it did not appear. Subsequently, the manuscript was found and by order of the Association it now appears in this volume.

subdivisions of the one class called infectious diseases, and to say that a disease is infective or infectious is not sufficiently comprehensive, we should either say that it is infectious-contagious, or infectious-miasmatic, as the case may be.

The question of contagion in tuberculosis has given rise to a great deal of discussion and difference of opinion, and while it is now universally admitted that the bacillus tuberculosis, discovered by Koch, is the cause of the disease, some hold to the theory that there must also be a predisposition, suitable soil, or, as some would style it, habitus phthisicus, otherwise the individual will have an immunity from the disease.

The contagium of tuberculosis behaves differently as compared with the specific virus of other contagious diseases, inasmuch as it is slow in its progress, and it usually requires a long exposure to effect a lodgement in the system, yet, it is nevertheless sure in its action.

It is more a question of dosage than of heredity or predisposition; the doctrine of heredity is now supplanted by that of infection.

I wish to emphasize here the importance of physicians and sanitarians advocating the contagiousness of tuberculosis, so that people generally will appreciate the situation and co-operate in carrying out prophylactic measures.

If we commit an error in this we will be on the side of safety. Cohen says that tuberculosis is not contagious in the ordinary acceptation of the term, but his instructions as to the prophylactic treatment are very much the same as those of authorities who do believe it to be contagious.

I am in favor of registering consumptives as having a contagious disease and instituting compulsory regulations, but they should be taught that prevention is with-

in their reach and in carrying out prophylactic treatment the conditions for their recovery are rendered more favorable.

Tuberculosis has been styled by some a "house disease."

Whittaker quotes from Flick, who says: "The figures point unmistakably to the fact that tuberculosis is not only contagious in the broad sense of the word but that a house in which the disease has existed remains a center of infection for an indefinite time."

In my experience of eight years in the practice of medicine I have noted quite a number of cases in which I thought infection had occurred by intimate association, as man and wife, and in some cases it seemed that the disease was contracted by going into a house to live which had been previously occupied by a consumptive.

Osler mentions intimate contact, as in the case of husband and wife, as one mode of propagation of the disease, and refers to a report made by a committee appointed by the British Medical Association for the purpose of investigating the contagiousness of tuberculosis. This committee reports one hundred and fifty-eight cases in which it is supposed that the disease was contracted through marriages.

He also refers to Weber's report of a patient who lost four wives in succession with tuberculosis, another who lost three, and four who lost two each. Nineteen years ago, Flint mentioned the same source of infection—man and wife—and advocated the doctrine of contagiousness, based on a specific virus which he predicted would be discovered.

Tappeiner experimented on dogs and other animals by placing them in an inhalation room in which the atmosphere was heavily loaded with bacilli; his servant, a very robust man of forty, of good physique, and with

no hereditary tendency, entered the room upon the protest of his friends, contracted the disease, and died in fourteen weeks.

Another interesting case in which tuberculosis was conveyed by contagion is reported by Erchharst. A mid-wife who was the subject of tuberculosis had a habit of blowing into the air passages of the new-born children, and in two years ten of these children died of tubercular meningitis, while children in the same village delivered by a healthy mid-wife did not show any signs of tuberculosis.

The Charlotte Medical Journal gives an account of Maussus' experiments in which healthy animals were placed in the same byre with tubercular ones. The bovines were especially liable to contract the disease.

Some life insurance companies ask the following questions: "How long since, if ever, were you associated with or did you act as a nurse for a consumptive?"

It must be remembered that while an individual may become infected by tuberculous meat or milk from a tuberculous cow the chief source of infection is by the sputa from a patient suffering with the disease.

Nuttall, of the Johns Hopkins Hospital, has shown that over four billions of bacilli are sometimes thrown off in the expectorated matter of a tuberculous subject in twenty-four hours.

With a view of preventing the spread of tuberculosis the Board of Health of New York City has issued a circular letter in English, German and Hebrew. It points out the danger in such plain language that the common people can understand it:

1. That consumption is a contagious disease.

2. That the danger is in the expectorated matter.

3. Consumption can often be cured if recognized early.

4. It is not dangerous for other persons to live with a consumptive if the expectorated matter is immediately destroyed and not allowed to dry and float through the air as dust.

5. A consumptive should sleep alone.

6. It is very important that every case be reported to the health department in its first stages.

7. The patient should avoid auto-infection, by so doing, his chances for recovery are much better.

I am enthusiastic in the belief that the prevention of tuberculosis is within the range of human possibility, and I might say, in this connection, that much has been developed during the past year to encourage us along this line.

Hardly a meeting of medical men was held during the year 1898 in which this phase of the question did not receive favorable consideration. England has her national organization for the prevention of tuberculosis, with large sums of money to be expended, and I would like to see Alabama not only first in the alphabetical list of States but also first in instituting measures that will lower the death rate within her own borders and help, if possible, to stamp out this scourge to humanity.

SURGERY OF THE LACERATED CERVIX UTERI AND PERINEUM.

By Wyatt Heflin, M. D., Birmingham.
Member of the Medical Association of the State of Alabama.

In discussing the surgery of these accidents to parturition, lacerations of the cervix will be taken up first, because of the anatomical relations of the part. When both accidents occur in the same patient, the cervical tears must first be restored. The sewing up of a laceration of the cervix immediately after its occurrence is strongly urged by some. If this is done, the suture material should be of the absorbable variety, cat-gut or kangaroo-tendon; for, silver wire, silk, or silk-worm-gut, when the uterus contracts, would be very difficult to remove. I have never done the immediate operation, preferring to wait six or eight weeks, at the expiration of which time the parts will be fairly well contracted. Nature often attempts to repair a lacerated cervix by throwing out granulations. Dr. T. A. Emmett claims that this granulating tissue becomes hard and is often the source of irritation and a cause of reflex symptoms and neuralgias in other parts of the body. Emmett has, by his courage and arduous labors, contributed more than any other man to the perfection of the plastic operations upon the lacerated perineum and cervix uteri.

Many improvements in gynæcological plastic surgery have been made within the last two decades, but the operation for complete tears of the perineum, "that is, those which extend through the sphincter ani and rec-

tum, has not, until recently, been changed or improved. Dr. Howard A. Kelly deserves the honor of having devised a very ingenious method for restoring the torn sphincter muscle, and for closure of the lacerated gut. Dr. C. E. Ristine, of Knoxville, claims to have devised a method for the same trouble which is very praiseworthy and ingenious.

Lacerated Cervix.—When the cervix is hypertrophied and infiltrated, it is always best to give a local preparatory treatment, such as hot vaginal douches once or twice daily, keeping the bowels regular, etc. Once or twice a week an application of tincture of iodine to the cervix should be made and the uterus drained with a boro-glyceride tampon, which is left in place for twelve hours. All cysts should be punctured. If the cervix is much congested it should be scarified and from four to eight drachms of blood drawn once or twice a week. The depletion of the cervix is quickly and easily done by exposing the cervix with a speculum and catching it with a tenaculum forceps, then, with a bistoury, both the congested lips are punctured five or six times. In the course of a couple or three weeks the worst kind of an infiltrated, everted, cervix will be softened and ready for operation.

Immediately before operating, a copious douche of hot water, say three or four gallons, should be given, and the bleeding will be much less than otherwise. The mode of operating for closure of lacerations of the cervix uteri is to place the patient upon her back, over Kelly's pad, with the legs flexed and hips drawn well down to the edge of the table. Now, with a speculum, or, better, with short, broad-bladed, retractors, the cervix is exposed to view and drawn down by tenaculum-forceps. If the uterus is bound by adhesions, or, if the patient has pyosalpinx, it is best not to make much traction upon the ute-

rus, for fear of breaking up adhesions or rupturing pus tubes. If there is only one unilateral tear Emmett prefers the patient upon her side, especially, when the vaginal outlet is large, as the tissues will not roll out so readily as when the patient is upon her back. The instruments required for this operation are: A couple of tenaculum forceps; Sims' speculum, or, three broad, short-bladed, retractors; Emmett's curved cervical scissors, right and left; scissors for wire cutting; scalpel, needle-holder and half a dozen short cervical needles, wire twister, and shield. The suture material may be silver-wire, silk-worm-gut, silk, or cat-gut. If there is an endometritis, which is nearly always present in these cases, it is best to dilate the cervical canal, curette, and mop out the uterine cavity with Churchill's, or plain tincture of iodine, before beginning denudation. Now, the vagina and cervix are thoroughly douched with an antiseptic solution and the parts thoroughly dried out with bits of gauze, or absorbent cotton.

The torn lips are now separated with a couple of pairs of tenaculum forceps to show the extent of the lacerations and the surfaces to be denuded. The flaps to be denuded are now marked off with a scalpel, care being taken to preserve the trumpet-shaped cervical canal.

It is of the utmost importance that the cicatricial tissue in the angles of the tears should be removed, else, the operation will be an inglorious failure and the patient's condition unchanged, or perhaps her symptoms will be aggravated.

Emmett begins the denudation by picking up with forceps a part of the tissue of the posterior lip that is to be cut away, dissecting with scissors well up into the angle of the tear, and continuing the dissecting onto the anterior lip and out to the point on the cervix previously marked off with the scalpel, thus removing the flap in one continuous strip.

Kelly makes an incision first into the angles, down through the scar, until the sound tissue is reached. The area to be denuded is then outlined with the scalpel and removed with the scissors.

The sutures are now introduced, beginning up at the angle, "entering upon the vaginal surface, and coming out on the uterine surface on one lip, and re-entering on the uterine surface and coming out at the corresponding point on the opposite lip."

From two to four wire or silk-worm-gut sutures are usually enough per side and should be cut about one inch long. Fine cat-gut sutures are used for close approximation of the parts between the wire sutures. A gauze pad is now placed against the cervix to absorb the discharges, and allowed to remain in place for two or three days. If no perineal operation is done at the same time, the sutures are removed in ten days, or two weeks, but, on the other hand, if vaginal tears are repaired at the same operation the cervical sutures should not be removed for four weeks, or even longer, if necessary.

Lacerated Perineum.—Perineal tears have, for convenience, been divided into three classes, or groups, as follows: First, second, and third degrees. These lacerations usually occur in the median line; there are also transverse tears.

Tears of the first degree are those which extend nearly half way down to the sphincter; those of the second degree extend to the sphincter muscle; while those of the third degree extend through the sphincter muscle and include more or less of the gut. Sometimes there is a rupture of the sphincter, and the gut is not lacerated, even the fourchette remains intact. This kind of a rupture is known as a "central rupture," and is about as bad as if the recto-vaginal septum had been torn, making a complete laceration.

The symptoms produced by perineal tears will not be discussed, only the surgery of the conditions found will be described. The immediate suturing of a perineal laceration is advisable, even if the tear extends through the recto-vaginal septum. The immediate suturing may fail, while, on the other hand, it might succeed and save the woman the pain and suffering of a secondary operation.

The old theory that the wedge-shaped perineal body supports the uterus and vaginal column has been exploded.

"The real supporting mechanism of the outlet is not the perineal body, but the anterior portion of the levator ani muscle. This broad, rounded, muscle arises on either side of the inner surface of the pubic ramus and passes back around the lateral vaginal wall to unite with its fellow behind the rectum, its fibres being intimately interwoven with the lateral walls of the rectum."

"The vaginal outlet has no direct means of closure, such as would be afforded by a powerful sphincter muscle, but depends for its support upon the indirect action of the levator muscle. For by the contraction of this muscle the lower end of the rectum is tightly lifted up under the pubic arch and the vagina is flattened out and held up between the two." It is further important to notice that the position of the plane of the pubic arch, in front of the plane of the levator fibres, renders the closure more efficient, like a 'cut off.' "It is this arrangement which gives the sigmoid curve to the lower extremity of the virginal vagina."

The transverse perineal muscles take their origin beneath the tuberosities of the ischium and cross the perineal body horizontally between the vaginal outlet and the anal orifice, each one fusing with its fellow on the opposite side." A number of the muscular bundles di-

verge from the horizontal fibres anteriorly and posteriorly at angles of about thirty degrees, to fuse in front with the constrictor vaginæ and behind with the sphincter ani and levator."

The external sphincter surrounds the rectal outlet and is attached posteriorly to the coccyx. So, it is seen that the floor of the female pelvis is composed of the levator and transverse perineal muscles, the superficial and deep fasciæ, and is, in fact, the real support of the pelvic and abdominal viscera.

When the tears are in the median line, and are of the first and second degrees, the Tait, or flap, operation is the best. It is best to use silk-worm-gut and cat-gut for sutures. The silk-worm-gut is used where tension is required, and the cat-gut for approximating the edges or flaps. In transverse tears, with relaxed vaginal outlet, the operation devised by Dr. T. A. Emmett is the best.

Dr. Howard A. Kelly has made some improvements upon the Emmett operation, that is, where the sphincter muscle is torn in connection with transverse tears. Kelly dissects out the ends of the sphincter muscle and unites them, end to end, with cat-gut, and the remainder of the operation is about the same as the Emmett operation. It is always best to give the patient a purgative the night previous to the operation and an enema a few hours before operating, to clear the rectum of all fœcal matter. If there is an endometritis or leucorrhœa, it is best to do a curettement before repairing the relaxed vaginal outlet. The instruments required for this operation are: Needle-holder, tenaculum forceps, tissue forceps, couple of shepherd-crook tenacula, Emmett's left-curved cervical scissors, retractors, scalpel, hæmostatic forceps, pair of straight scissors for cutting sutures, half a dozen medium-sized curved needles, silk-worm-gut and cat-gut for sutures. To do this operation well and quickly, it is

necessary to have three or four assistants. After the patient's hips are brought down well to the edge of the table, a Kelly pad is placed under her, and her legs are held out of the way by the Kelly leg-holder.

An assistant on either side now separates the labia, the shepherd-crook tenacula are now fixed on either side at the juncture of the hymenial ring, leaving sufficient tissue across the anterior vaginal wall between the tenacula for the new outlet.

The shepherd-crook tenacula are now crossed to see what size the new outlet will be, and if the size is too small or too large, they are taken out and again fixed in place. These tenacula mark the upper lateral limits of the denudation. The next important step is, to determine that point on the rectocele which, when drawn down by a tenaculum, will present a triangular tongue or V shaped area, marked laterally by two folds, which lead up to fixed points in the lateral sulci which mark the limit of retraction of the fascia. This tongue-shaped portion of vaginal wall will, when drawn down, constitute the posterior vaginal wall of the new outlet. After these three important points are fixed, the next thing is to outline with the scalpel the area to be denuded. The central tenaculum and one of the lateral tenacula are now drawn widely apart, so as to expose one of the vaginal sulci, which is marked off, beginning at one of the shepherd-crook tenacula, going up on the latter side to the apex of the sulcus, thence down on the rectocele side to the central tenaculum and below it; thence up to the apex of the opposite sulcus and along the lateral wall of the sulcus to the shepherd-crook tenacula. The outline is now completed by a semi-circular incision extending around the posterior wall of the outlet, keeping within the hymen above, but embracing any scar tissue

seen below. It is always well to keep in mind the vulvo-vaginal glands and to keep inside their ducts, so that they will not be obliterated by the operation.

The hemorrhage following the denudation is sometimes free and persistent, and may be controlled by catch-forceps, or by ligation with fine cat-gut. Usually the deep tension and approximation sutures will control all bleeding.

This denuded surface is now closed by three or four silk-worm-gut sutures, and from eight to twelve cat-gut sutures. One silk-worm-gut tension suture is placed within the vagina in either sulcus, and the balance of the sutures in the sulcus are cat-gut. This tension suture is introduced by entering upon the mucosa on the lateral wall of the left side, above the shepherd's-crook tenaculum, and passing downward and emerging at the bottom of the sulcus, it is re-entered and carried out into the mucosa on the opposite side. This suture may now be tied, and used as a tractor to facilitate the introduction of the cat-gut sutures above, which must go down deep into the tissues, so as not to leave a pocket, or dead space, below them after they are tied. These sutures may be tied as they are introduced, or, after they are all placed. The sulcus on the opposite side is closed in the same way with a silk-worm-gut and three or four cat-gut sutures. Most of the remaining area may now be brought together by a single gathering suture of silk-worm-gut, embracing the upper angles on the sides and transfixing the rectocele. An auxiliary silk-worm-gut tension suture should be introduced midway between this gathering tension suture and the end of the newly outlined perineum. The balance of the sutures should be cat-gut. The sutures on the outside should be removed on the eighth or tenth day; the internal ones may remain several days longer.

In complete tears of the perineum the sphincter ani muscle is torn and its restoration complicates the operation, just described, somewhat. But, after the sphincter-ends are dissected out, liberated, and sewed together, end to end, with cat-gut, the remainder of the operation is the same as given above.

Dr. Kelly holds that the sphincter ani muscle in cases of complete tear will vary in form in different cases, from a broken circle, with its ends still bound together, all the way to a shallow arc, in which case the muscle is short and thick, with a deep dimple in the skin behind it. A smooth glazed depression, at times puckered or pitted, at the lower angle of the perineal scar, frequently serves as the sphincter landmark. It is sometimes difficult to identify the sphincter-ends upon simple inspection, but by pulling on or pinching the muscle, so as to stimulate a contraction, the positions of the ends may always be discovered.

In complete tears of the perineum the sphincter ani muscle is torn and its restoration complicates the above operation somewhat, but after its ends are dissected out, liberated, and sewed together, end to end, with cat gut sutures, the remainder of the operation is the same as that described above.

DISCUSSION.

Dr. R. S. Hill said: In regard to laceration of the cervix uteri, I am of the opinion that trachelorrhaphy should not be done when there are signs of marked structural changes throughout the part. When the cervix is very much hypertrophied, and we prefer not amputating it, because the use of a pessary is indicated, I think it advisable to spend some time endeavoring to restore the tissue to a comparatively normal state, by making local

applications of ichthyol and glycerine. If we succeed in doing this, the laceration may be, in every respect, successfully repaired. By far the majority of lacerated cervices that I have seen have been so changed in structure that nothing short of amputation was to be considered. To do a trachelorrhaphy on a cervix, the glands of which are involved in an extensive pathologic process, will surely augment the trouble, by closing the outlets of some of them.

It is estimated that the perinei of 30 per cent. of primiparea and 5 to 10 per cent. of multiparea are torn. The frequency, therefore, of these injuries is sufficient to impress us with their importance.

I know I voice the sentiment of those present when I express my thanks to the essayist for the able manner in which he has brought this subject to our attention. He having so thoroughly considered the measures for the cure of perineal lacerations, I shall devote my time to a discussion of the way or ways in which they influence the general system.

Perineal injuries in which the solution of continuity of tissue is visible are easily detected, and usually repaired at the earliest practicable moment. This is especially true of those lacerations extending into the rectum. We do not, therefore, in proportion to their frequency, so often meet with evil results in these cases as in those concealed from view, such as the sub-mucous variety. Turning our attention to the anatomy of the female pelvis, we find several groups of veins called plexuses—plexus of the vulva, plexus of the broad ligament, plexus of the rectum, etc. When the perineal fascia and the levator ani muscles are injured there is a retardation of the circulation through some, if not all, of these plexuses. This interference in the circulation makes proper involution of the uterus improbable. Thus, we find, at the

outset, a varicose condition of the pelvic venous plexuses and a heavy sub-involuted uterus. Leaving these conditions, let us recall the manner in which the fœcal matter is expelled. Being forced downward it meets with the resistance of the sphincter ani muscles, which in the normal condition of the parts is overcome and allows the waste product to pass off. If, however, the support of the levator ani muscles and the perineal fascia to the anterior wall of the rectum, has been destroyed, by a previous injury, instead of the fœcal matter passing naturally and easily through the sphincter ani muscles, it bulges forward and downwards, forming a rectocele. This rectocele, by pulling on the cervix uteri, may overcome the utero-sacral ligaments and drag the sub-involuted uterus in the axis of the vagina. This will, of course, increase the pelvic congestion, and diminish the chances of uterine involution. It is readily appreciated that the conditions mentioned will irritate and disorganize the functions of the pelvic nerves, and as they are so intimately and intricately connected with the solar plexus the abnormal impulses formed in the pelvis will be conveyed to the great nervous center of the abdomen, where they are sent out over the centrifugal nerves to the abdominal viscera. Every impulse traveling over a centrifugal nerve excites the organ or tissue to which the nerve is distributed to increased activity. Now then, the abdominal organs, receiving the more or less constant and abnormal impulses which have their origins in the pelvis, will in time lose their normal rythm—the capacity of normally functioning—and, as a result, digestion is disturbed, which will eventually produce anæmia and auto-intoxication. With an insufficient quantity and poor quality of nourishment, furnished the system by a disabled digestion, the vital forces of the body will become incapable of meeting the demands made upon them.

One by one the functions of the sub-divisions of the nervous system become disorganized, until, finally, the higher nervous centers become impaired, and we have the objective, as well as the subjective, signs and symptoms common to neurotics. Again, the higher nervous centers may be disturbed by the abnormal impulses, formed in the pelvis, being reflected over the cerebro-spinal nerves to them. In conclusion, while I wish to emphasize the importance of examining the perineum in determining the cause or causes of anæmia and neurasthenia, I would not, however, have an examination to terminate with the discovery of an injured perineum, because its presence is not by any means satisfactory proof that it is the only or principal etiologic factor in the case. Every organ and tissue in the body should be explored before we are justifiable in forming an opinion in these cases. We must not expect in these neurotic subjects immediate relief by repairing the perineum, though the laceration is responsible for their condition. Perineorrhaphy removes the cause, and after this is accomplished our attention should be turned to the direct or indirect effects of the cause on the nervous system and other tissues of the body.

Dr. I. L. Watkins said: The ideas advanced by the essayist are so decidedly at variance with the practice of the gynæcologists of the day that I desire to make some remarks on the paper.

In the first place, the preparatory treatment before operating on laceration of the cervix is unnecessary, and the cicatricial tissue in the angle of the rent—the so-called cicatricial plug—is very rarely, if ever, a factor in the causation or symptoms. In his effort to get rid of this tissue, the essayist falls into error in his course of treatment. The tissues which cause the symptoms

are the glandular structures in the anterior and posterior lips of the cervix. The character of case described by the essayist is rarely benefited by the operation recommended. The best operation is the Schroeder operation, or its modifications, as practiced to suit the ideas of each individual operator. It is unnecessary for me to describe the operation here, as this is better done in text books than I can do it.

I am inclined to the opinion that the preparatory treatment might prove misleading, and cause the operator to leave pathological tissue in the cervix, which would prove a source of trouble in the future.

After the accurate description of the anatomical arrangements of the supporting power of the pelvic floor, given by the essayist, I can scarcely see how the separation of the muco-cutaneous tissues in a lacerated perineum and then the bringing of them together in the opposite direction, as recommended by the essayist, would furnish any support to organs displaced by laceration of the upper border of the levator ani muscle. The Tait operation is only applicable to simple skin lacerations.

Dr. Jelks, of Arkansas, (by invitation) said: I believe that in all primiparas the perineum is torn more or less in child-birth, not in the median line, but laterally.

The tear in the levator ani muscle is more important than the tear of the perineum. The white fibrous tissue is also torn and constitutes a large element in the trouble that results. This, together with the tear of the levator ani muscle, allows the posterior wall of the vagina to drop away from the anterior wall, consequently, the vagina stands open, instead of being closed, and readily admits infection.

I strongly advise young practitioners to carefully examine the perineum after every parturition, and to do so by ocular inspection.

Dr. Brock discussed the paper, and took issue with some of the positions announced by Dr. Jelks.

Dr. Heflin, in closing the discussion, insisted upon preliminary treatment, and differed widely from the position on this point, announced by Dr. Watkins. He also differed from Dr. Jelks in reference to ruptures of the perineum never occurring in the median line, and said he had seen many such ruptures.

He emphasized the importance of thoroughly examining all women after labor, and spoke of a case he had recently seen in consultation, which was a very forcible illustration of the wisdom of always making these examinations.

The attending physician was treating the lady for diarrhœa, from which she was really suffering. Upon inquiring into the history of the case, Dr. Heflin found that the lady had been recently confined. He insisted on thorough examination and found a ruptured perineum and a bi-lateral rupture of the cervix, through which infection of the system had taken place. The diarrhœa, therefore, was but a result of the general systemic infection which had taken place in the way mentioned. The lady died. The attending physician declared that hereafter, in his practice, he would carefully examine the perineum and cervix uteri of every woman after confinement, and of every one who had been recently confined and was suffering from any trouble whatever.

The next annual meeting of The Medical Association of the State of Alabama will convene in the city of Selma at 12 o'clock M. on the third Tuesday of April, 1901, and continue for four days.

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